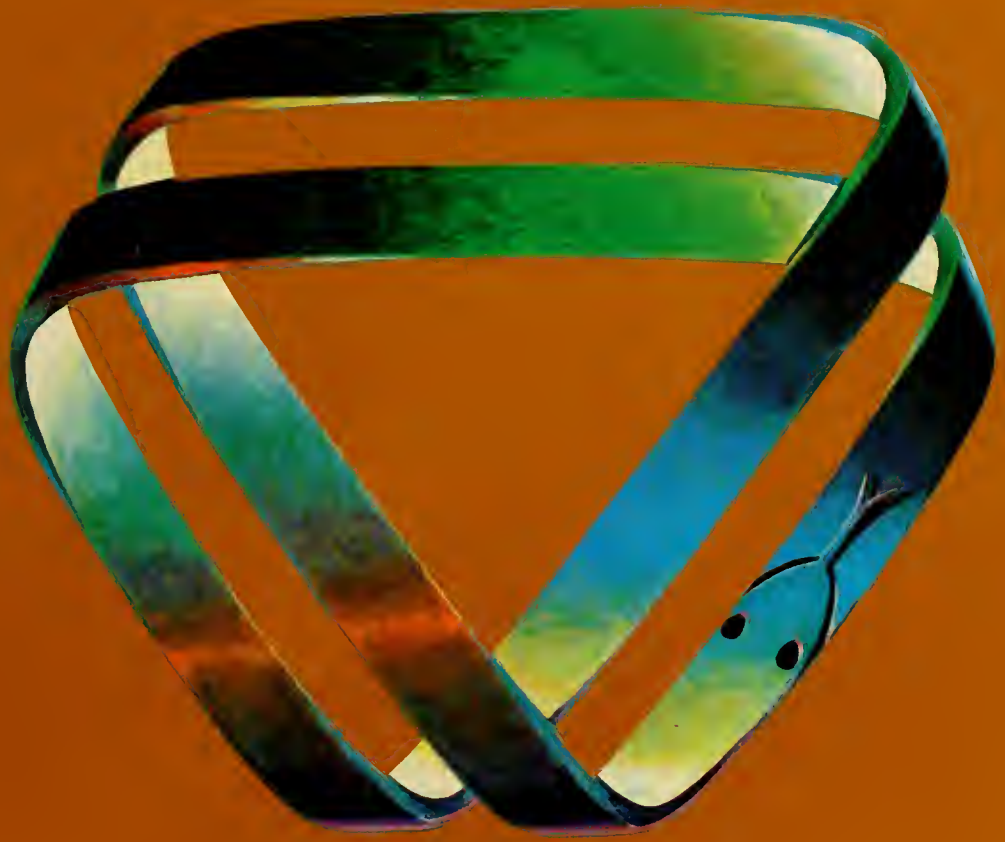

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THE RECORD COMPRISES:

The Graduate Catalog, the Undergraduate Catalog, the Catalogs of the Colleges of Law and Medicine, and various bulletins on regulations, policies, and information. These documents are sent gratuitously to all persons who apply for them. The applicant should state specifically which document or information is desired.

Address: The Registrar, University of Florida, Gainesville, Florida 32611.

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COLLEGE OF MEDICINE CATALOG

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ACADEMIC CALENDAR 1974-1975

ALL CLASSES

Registration	Tuesday, September 17, 1974
Homecoming	Friday Noon, October 25, 1974 Saturday, October 26, 1974
Veterans Day	Monday, November 11, 1974
Thanksgiving	Wednesday, 6:30 p.m., November 27, to Monday, December 2, 1974

FIRST YEAR [Class of 1978]

Phase A

1st Quarter

Orientation	Friday and Saturday, September 13-14, 1974
Classes Begin	Monday, September 16, 1974
Quarter Ends	Friday, December 20, 1974

2nd Quarter

Classes Begin	Monday, January 6, 1975
Quarter Ends	Saturday, March 22, 1975

3rd Quarter

Classes Begin	Monday, March 31, 1975
Quarter Ends	Saturday, June 14, 1975

SECOND YEAR [Class of 1977]

Phase B

Classes Begin	Monday, August 26, 1974
Clinical Rotations	Sunday, December 1, 1974

THIRD YEAR [Class of 1976]

Phase B (continued)

Clinical Rotations End	Saturday, November 16, 1974
Pharmacology Course	Monday, November 18 to December 14, 1974

Phase C

Classes Begin	Thursday, January 2, 1975

FOURTH YEAR [Class of 1975]

Phase C (continued)

Classes End	Friday, June 6, 1975
Commencement	Sunday, June 8, 1975

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Assistant Dean for
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Preprofessional Education

MELVIN FRIED, Ph.D.
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Committee

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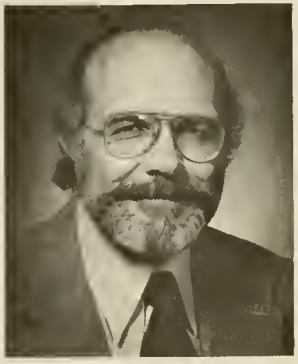
Assistant Dean for VA
Hospital Relations

GEORGE T. SINGLETON, M.D.
Assistant Dean for Clinical
Affairs



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GENERAL CONSIDERATIONS

The College of Medicine, a component college of the J. Hillis Miller Health Center of the University of Florida, opened its doors to medical students in September, 1956. The various programs rapidly expanded to include a curriculum leading to the M.D. degree, a Ph.D. program in the basic medical sciences, internships and residency programs in the various specialties and subspecialties of medicine, and numerous special fellowship programs of clinical or scientific orientation.

The College of Medicine aspires to serve as an academic center of scientific and educational excellence and leadership in medicine and allied health fields, and highly specialized medical care services to patients referred by practicing physicians. The faculty is dedicated to programs of research, education, and patient care, while providing the student educational experiences of the highest quality. Located in Northcentral Florida, the College of Medicine is engaged in intramural programs with the Gainesville Veterans Administration Hospital and extramural programs involving neighboring communities as well as a network of educational services in Daytona Beach, Jacksonville, Tallahassee, Pensacola, and other Florida cities.

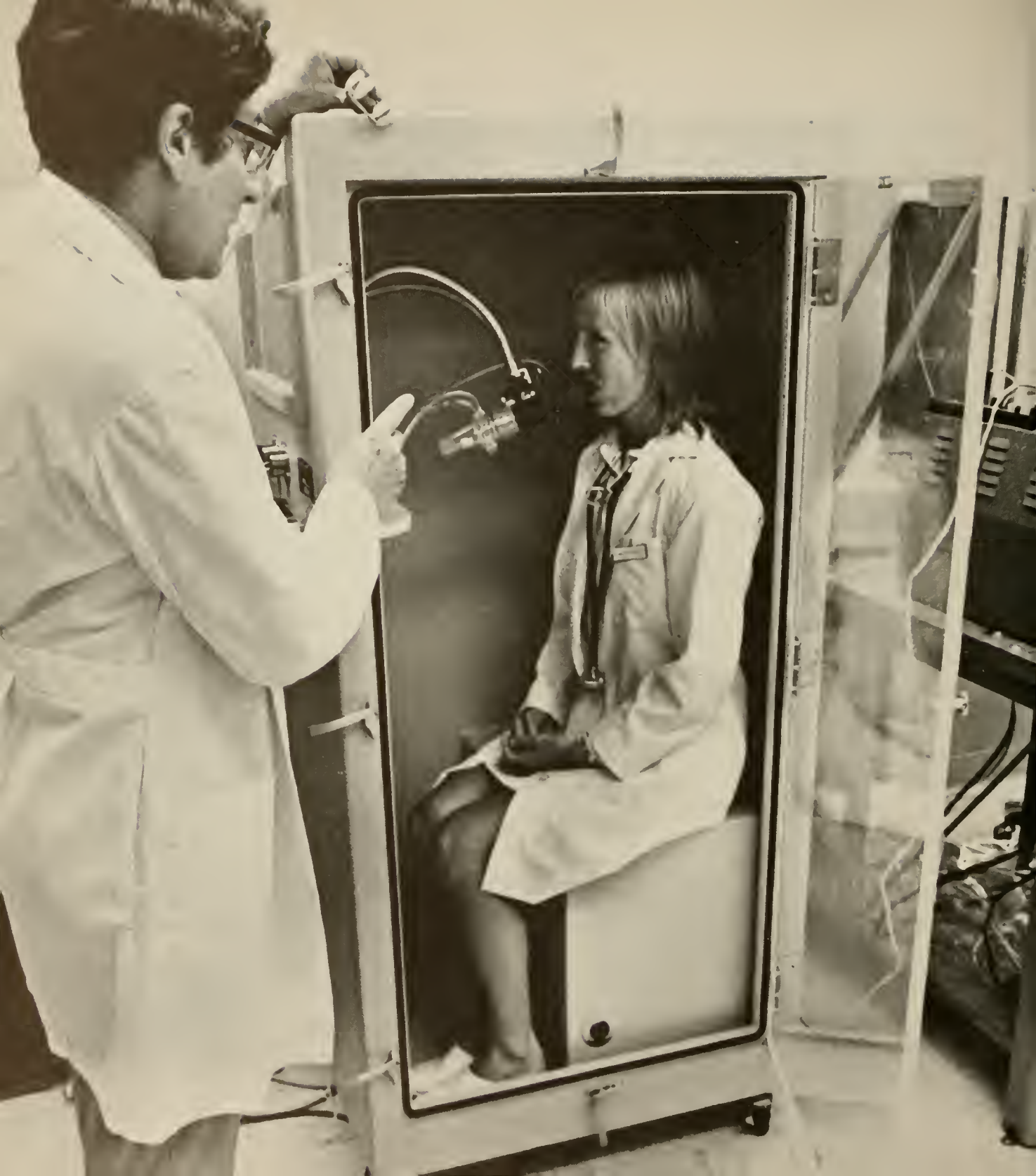
Situated at the southeast corner of the 2000-acre campus of the University of Florida, the College of Medicine enjoys the benefit of strong ties with other programs within the University. The relationships to engineering, biological sciences, social sciences, education, psychology, and other disciplines are of particular importance.

EDUCATIONAL CONCERNS

The educational concerns of the College of Medicine begin with preprofessional counseling, and include the program leading to the M.D. degree, the internship, residency, and continuing medical education for the practicing physician. Each phase of this educational continuum has particular emphasis and significance.

Educational offerings for the student of medicine must draw on the humanities, natural and biological sciences, and on technology to provide a well-balanced educational experience. The graduates of the program must have an appreciation both for the breadth of the arts and skills of medicine and the highly specialized and fundamental nature of scientific medicine. The graduates of the M.D. degree program must have sufficient experience to be able to choose from the many career opportunities in medicine. Also, they must have acquired an attitude of continuing self-education and must have learned to adhere to the highest scientific and ethical standards of the medical profession.

The College of Medicine and its programs received full national accreditation first in 1960



and again in 1970 by the Liaison Committee on Medical Education of the Association of American Medical Colleges and the American Medical Association. The residency programs are accredited individually by the respective Specialty Boards.

STUDENTS

The College aspires to attract into the various programs students of the highest caliber. High standards of scholastic achievement, moral character, and motivation are demanded of the student. The highly personal relationship between patient and physician places the latter in a position of trust, which demands maturity, integrity, intellectual honesty, and a sense of responsibility. Because of the vast area of science which must be mastered by the physician, the student of medicine must possess a high basic aptitude supplemented by academic preparation of the highest order. Through an active recruitment program, a broader representation of the ethnic mixture of the state is sought in the student body. The College adheres strictly to the principle of ethnic, racial, religious, sex and social equality among its student body and faculty.

FACULTY

The student is accepted into a fellowship of learning that should mark the beginning of an educational and personal relationship of long duration. To meet the requirements of modern medical education, the faculty must be representative of a wide area of academic experience. In addition to the demand for highest competence in a chosen field of specialization, the faculty must be interested in education and in students. It must attempt to develop and maintain close faculty-student relationships through personal, professional, and social contacts. The nature of investigative and clinical training demands close interaction between faculty, students, and the problem at hand, be it the patient or the object of scientific study.

RESEARCH

Individual and cooperative investigations constitute an important aspect of the activities of faculty and students. Facilities and equipment are made available through state, private, and federal funds. In addition to the research laboratories and animal facilities in the J. Hillis Miller Health Center and the Veterans Administration Hospital, there are animal research facilities at the Health Center Animal Research Farm.

Research projects of the faculty of the College of Medicine range from problems of molecular and cellular biology to all phases of basic and applied clinical investigations

including behavioral sciences, epidemiology, and many other disciplines. Collaborative projects are in process with veterinary science, engineering, biology, nuclear sciences, psychology, sociology, education, and many other disciplines.

In view of the nature of modern biomedical investigation, it is natural that many interdepartmental efforts have evolved. Most of these involve faculties from the basic and clinical sciences, and frequently from other colleges in the University. In general, these groups are organized along categorical lines such as the Center for Neurobiological Sciences, the Cardiovascular Group, the Tumor Biology Group, the Divisions of Infectious Diseases, Genetics, Endocrinology and Metabolism, and Gastroenterology, to mention a few. These groups serve a specific research need for the faculty and comprise very strong educational units in the new curriculum. The Clinical Research Center in the Shands Teaching Hospital and Clinics is a focus for clinical investigation. Very active collaboration in both research and education is developing between faculties of the College of Medicine and the College of Engineering. Educational opportunities in biomedical engineering are available at all levels: pre-bachelor, graduate and postgraduate.

FACILITIES

Most programs and faculty are housed in the J. Hillis Miller Health Center. The Health Center's facilities include the Medical Sciences Building, the Communicore, the Colleges of Dentistry, Health Related Professions, Nursing, and Pharmacy, the Shands Teaching Hospital and Clinics, and the Gainesville VA Hospital.

The Shands Teaching Hospital and Clinics, which has a capacity of 405 beds, has some 15,000 inpatient admissions recorded each year. The Clinics record over 130,000 outpatient visits per year. The VA Hospital, located across the street from the Health Center, has a capacity of 480 beds and provides additional clinical and research sources. Both institutions offer ample opportunity for hospital-based bedside and ambulatory teaching. Formal educational affiliations have been established in Tallahassee, Pensacola and Jacksonville as well, thus providing additional basic science and clinical science resources.

Construction of the Communicore, a facility unique to the College of Medicine, was completed in December, 1973. This building houses lecture and seminar rooms, multidisciplinary teaching laboratories designed to be flexible enough to accommodate the wide variety of laboratory teaching programs of the different disciplines, study areas, and a center for development and utilization of audio-visual and automated learning aids. In addition, the Library has a collection of 135,000 volumes and 2,000 journal

subscriptions. Computer-based bibliographic retrieval services, such as MEDLINE, are available to support teaching and research activities. The Library participates in a regional network of medical libraries to supplement its information resources.

ACADEMIC CONSIDERATIONS

Medicine as a profession deeply rooted in the culture of the society it serves must be responsive to social needs and demands. Deficiencies in the medical system developed slowly in recent decades and assumed critical proportions in the last few years. Both the consumer and the provider of medical care now are expecting major changes in the practice of medicine and its capacity to serve all elements of our population. Medical education, although somewhat isolated from the day-to-day problem of medical care, has been drawn into the mainstream of crisis and change. In response to this challenge, the faculty of the College of Medicine has been deeply concerned with the adaptation of the educational programs to the needs of today and tomorrow.

THE CONTINUUM OF MEDICAL EDUCATION

The curriculum of the College of Medicine has several basic objectives. First, it is designed to instill in the medical student early in his first year the attitude of a physician. By presenting the student with a clinical problem and sufficient basic science data to understand the organic malfunction, it is hoped the learning process will assume a meaningful significance for him. Second, the curriculum is designed to acquaint the student with the different facets of medicine in such a fashion as to permit him to make an early choice from the many career offerings in medicine. Third, the study plan permits the student to assume the responsibility for developing an educational program relevant to his particular needs — a program which will permit him to derive maximum benefit from the learning process.

The present medical curriculum is the product of a trend over the last 50 years in which the medical school and its mother university have established close academic ties. This trend has had a great impact on the quality and character of medical education. It has facilitated the emergence of scientific medicine and increased sophistication of patient care (including preventive medicine). The price paid for these advances has been a rising cost of medical education and medical care, as well as an alienation of medical schools and their faculties from organized medicine and the practitioner. As our society

approaches an important juncture in the development of health and medical care systems, the conflict between education and practice is becoming the cause of increasing concern for involved parties. Medical school faculties now are studying carefully the long-range aspects of their educational endeavors, as well as their position as proponents or intermediaries between opposite points of view. As a result of this review process, significant proposals for far-reaching change are being made, which will have a long-lasting impact on medical education and medical schools.

THE ART AND SCIENCE OF MEDICINE

The scientific basis of medicine universally is accepted as a prerequisite for medical practice — at least on an intellectual level. Too often, however, we are confronted with the idea that the practice of medicine is an art rather than a science; and furthermore, that too much science in medical education renders the future physician insensitive to the human needs of his patients. Frequently medical students complain that entrance into medical school really does not bring about the expected change in fulfillment of their motivational desires. Often they feel removed from the art of medicine to the point where they cannot experience satisfaction or gratification of their emotional needs. As a result, a cynical attitude may emerge toward medical and patient problems, with a subsequent loss of motivation toward learning. The educational experience must help the student to achieve a high quality blend of humanism and science, which will enable him to render optimal medical care to his patients. The faculty hopes some of the new programs will provide a blending of the art and the science of medicine.

Through careful planning an effort will be made to use the fundamental knowledge of the basic sciences in a meaningful relation to career goals in medicine. While during Phase A (first year) the emphasis will be on sciences, it will focus on clinical medicine during Phase B (second year and first half of the third year). The opportunity to advance in both fields in a correlated fashion then will be offered in Phase C. It is hoped this program will contribute toward a resolution of the ambivalence between science and the practice of medicine.

The effect will be enhanced by an earlier beginning of clinical rotations by the student (second quarter of the second year), thus eliminating prolonged frustration.

These two features are of special significance for modern medicine, since there is widespread recognition that delay between scientific discovery and its clinical application is too long and must be shortened. We expect the graduates of our new program to have less difficulty in retaining a true feeling for a close relationship between science and practice.

TO-DAY IS

FLEXIBILITY OF PROGRAMS

For many years, medical faculties attempted to adhere to a principle of completeness in spite of the increased volume of knowledge in the basic medical and clinical sciences. They added new courses and condensed old ones until the deluge of factual material over-extended the student's capacity for retention, as well as his facility for mental integration. In addition, the assumption was made that a single standard program of instruction would be adequate for all students accepted into the medical program. Experience at the University of Florida has since prompted consideration of the varying backgrounds of medical students and an elastic curriculum which will be relevant to the individual's needs and will permit incorporation of further developments in medical education. Consequently, the new program at the University of Florida differs from the previous curriculum in the following ways:

1.) The basic or core program no longer is designed to transmit the total knowledge presumed necessary for the practice of medicine. The emphasis has changed from presentation of content to the transmission of an educational process, whereby the student largely is required to seek out for himself the necessary content. Admittedly, the student will have wide gaps in his knowledge of basic sciences and the practice of medicine, but he should have sufficient information to make a rational and well-informed decision regarding his further education.

2.) Although students in a medical school all share the desire to become physicians, their backgrounds and specific goals vary greatly. By permitting greater individualization the new curriculum will enable the student to adapt his personal program to his previous educational experience, his individual learning speed, and to his career plans for the future. In providing for this flexibility, the medical curriculum will become an educational continuum beginning with preprofessional education and culminating with continuing medical education for the practicing physician.

3.) The new medical program will endeavor to free the student from the classroom and provide him with the opportunity to pursue his studies in the library or laboratory. While the regular course load for the first year of the medical student previously consisted of 34 to 36 hours per week, it has been reduced to 25 hours in the new program. The student with more time to devote to individual studies will require greater support also — through guidance, counseling, teaching aids such as computer assisted instruction, and others.

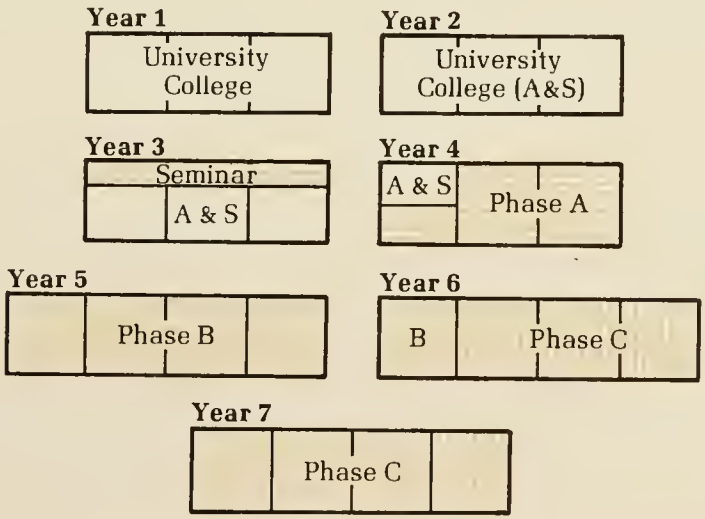
4.) It is anticipated that the length of study in the medical program can be adapted naturally to the needs of the individual student. In some instances first year courses may be used to fulfill undergraduate degree requirements. In others, a student may embark on an early residency program or pursue a combined M.D.-Ph.D. degree program. The prime

emphasis of the new curriculum will be on providing a program which has the elasticity to encompass individual needs and interests.

In addition to the change in structure of the curriculum, two new programs for entrance into medical school besides the traditional route, have been developed. They are:

JUNIOR HONORS MEDICAL PROGRAM

The Junior Honors Medical Program allows the highly motivated and qualified student to integrate the latter portion of premedical education with preclinical basic science medical education. Application to the program takes place during a student's second year of college. Students accepted into the program are simultaneously accepted into the College of Medicine. Third year Junior Honors students take one seminar each quarter (MED-BCH 436, MED 437 and MED 438). These seminars provide the student with a solid background in biochemistry and other areas of basic preclinical basic science. Emphasis in these seminars is placed on student participation in a relatively non-structured and informal format. In addition to the seminars, students continue to register for course-work within the College of Arts and Sciences. Many students in the program also become involved in research projects. The fourth year, the participants merge into the standard Phase A medical program. Since the College of Arts and Sciences grants credit for the third year seminars and most of the Phase A work, program participants are able to receive a B.S. degree at the end of Phase A.



Students are eligible to apply if they have (1) completed at least one year (three quarters) of zoology; (2) completed two courses (quarters) in calculus; (3) completed freshman chemistry and organic chemistry; (4) completed University of Florida's general educational requirements, English, institutions and humanities either via course or placement credit and (5) have a 3.5 or higher grade point average. Students who have also completed their foreign language and or physics requirements during their first two years are in a favored position with respect to application to this program. Although primarily intended for second year students at the University of Florida, applications are also considered from students not enrolled at the University of Florida who meet the above requirements.

Additional information about the Junior Honors Medical Program and the application procedures may be obtained by writing Dr. James A. Deyrup, Assistant Dean for Preprofessional Education, College of Medicine, University of Florida, Gainesville, Florida 32610.

PROGRAM IN MEDICAL SCIENCES [PIMS]

The Program in Medical Sciences (PIMS), an inter-university approach to medical education, began in the fall of 1971 on the Florida State and Florida A & M University campuses in Tallahassee. In this program, the two Universities in the state capital have combined efforts to provide instruction in the preclinical medical sciences parallel to the Phase A curriculum of the University of Florida College of Medicine. Since this instruction is integrated with traditional undergraduate degree programs in a college such as Arts and Sciences, the time permitted to achieve competency in the preclinical sciences is flexible. While it is expected that most students will spend five years in reaching this level, a number of accelerated students may do so in four years, others in six.

Participation and enrollment in PIMS courses is limited to full-time undergraduate students at Florida State and Florida A & M Universities. From among the participants in the program, an evaluation committee determines which students are to be awarded *secured status*. This status assures the student of entrance into Phase B at the University of Florida College of Medicine, assuming acceptable academic performance and professional growth during completion of the program requirements.

The curriculum is designed around a nucleus of existing courses in the social, biological and physical sciences at Florida State and Florida A & M Universities, and contains all of the traditional basic science disciplines, short of physical diagnosis and systemic pathology. Clinical seminars and other clinical experiences are furnished by the community of practicing physicians in Tallahassee with the cooperation of Tallahassee

Memorial Hospital, The Florida State University Health Service, and Sunland Training Hospital.

Detailed information on the Program in Medical Sciences can be obtained by writing the Office of the Director, Program in Medical Sciences, Florida State University, Tallahassee, 32306.

The College of Medicine also offers students and housestaff the opportunity to train in cities other than Gainesville in such programs as:

JACKSONVILLE HOSPITALS EDUCATIONAL PROGRAM [JHEP]

Eight hospitals in nearby Jacksonville formed the Jacksonville Hospitals Educational Program (JHEP) with the goal of improving medical education in the community. In 1969, by action of the Board of Regents, JHEP became a division of the J. Hillis Miller Health Center. An assistant dean and a full-time faculty for the College of Medicine are in residence in Jacksonville.

There are elective and required assignments in a variety of clinical areas available in Jacksonville. These afford the opportunity to observe patients in a community hospital setting and to become acquainted with the many problems of health care delivery in the urban area. In addition to exposure to a large full-time faculty, the student works with practitioners and can learn of the many nuances of practice removed from the academic center.

A number of residencies are conducted in Jacksonville. Residents participate in the teaching of students. JHEP conducts a number of programs for continuing education of practicing physicians to which students are welcome.

A nationally copied medical library system supports the teaching and research activities with extensive periodic holding; bibliographic services and audio-visual collections.

PENSACOLA EDUCATIONAL PROGRAM [PEP]

A unique academic affiliation between the College of Medicine and the Pensacola Educational Program (PEP) has been established. This affiliation provides the undergraduate medical student from the University of Florida an opportunity to obtain a variety of clinical elective experiences in Pensacola. In addition, numerous opportunities exist for graduate and postgraduate educational programs between the two institutions.

COMMUNITY MEDICINE

The development of the University of Florida's Shands Teaching Hospital and Clinics has

played an important part in accelerating the emergence of scientific medicine by providing ideal conditions for certain aspects of clinical teaching. The student in the teaching hospital, however, is confronted with highly selected types of patient problems, which in the outside world are exceptions rather than the rule. He gains little insight into the day-to-day problems of minor and major illnesses as they occur in the community.

The College of Medicine has developed educational programs in various community settings to provide medical students and physicians-in-training experiences in the common medical problems of ambulatory health care. The rural health activities of the College of Medicine are renown for their contributions to patient care and medical education.

By extending the education of medical students into the community, students are also provided the opportunity to view and understand the non-clinical factors of family and community groups and institutions that affect medical care. Every medical student will participate in a community health clerkship which also includes an opportunity for a brief preceptorship with a practicing physician. Through these community experiences the faculty and students together will become familiar with the common medical ills seldom seen in a hospital.

A basic premise in the community health programs of the College of Medicine is that they will direct the talents of the faculty toward the problems of health care delivery and engage the interest and enthusiasms of the medical students toward their future resolution.

PREPROFESSIONAL EDUCATION

The undergraduate college years are uniquely important to the education and training of a physician. The role of the physician in his community, as well as the quality of the health care he delivers, will reflect the breadth of his liberal education as much as it does the depth of his professional education. It is difficult to overstate the importance to the future physician of a strong background in the social-cultural area of study as increasing recognition is paid to the environmental and behavioral aspects of disease and the continuity of health care within the community.

This does not imply that the student's knowledge of physical and biological sciences is of less importance; on the contrary, the scientific basis of our understanding of disease processes is rapidly expanding. Rather, it emphasizes the desirability of a carefully selected program in liberal education with a strong core of understanding of the principles of physical and biological science.

The preprofessional student's educational program, as well as his selection of activities, should lead to the development of intellectual maturity and judgment, efficient study habits, and effective powers of reasoning. These goals of personal development, added to the importance of basic knowledge obtained in the social, cultural, and natural science areas of study, emphasize the significance of the liberal arts for the education of a physician.

THE APPLICANT POOL

Generally, students applying for admission should plan to complete the requirements for a bachelor's degree. However, a limited number of well qualified students may be accepted without fulfilling the degree requirements, provided they show evidence of sufficient preparation for the study of medicine.

Personal qualities of a high order, a genuine concern for human welfare, and superior intellectual achievement are the primary requirements for admission. Such intellectual achievement is indicated in part by performance in undergraduate courses. Applicants with an overall "B" average as a minimum will receive strongest consideration for admission to the College of Medicine.

The College of Medicine admits both men and women to its entering classes; members of minority groups are strongly encouraged to apply. A limited number of out-of-state students, in proportion to the number in the University as a whole, may be admitted. Applicants over the age of thirty rarely will be given strong consideration.

Applicants from students presently enrolled in another medical school will be considered provided (1) the student is eligible to continue in his present medical school, and (2) the school he is now attending is accredited by the Association of American Medical Colleges.

Special programs of study leading to graduate degrees in the basic medical sciences and admission requirements for these programs are outlined on page 23 of this Catalog.

BASIC SCIENCE REQUIREMENTS

The minimum science admission requirements include basic introductory courses and laboratories in the following subjects:

Biology—8 semester hours (12 quarter hours)
General [Inorganic] Chemistry—8 semester hours (12 quarter hours)
Organic Chemistry —8 semester hours (12 quarter hours)
Physics—8 semester hours (12 quarter hours)

Although additional science courses beyond the minimum will not enhance the chances for an applicant's acceptance, many students desire an additional background in science. For this purpose courses in physiology, biochemistry, embryology, physical chemistry, microbiology and genetics should be considered. It is not necessary to choose one of the sciences as a college major.

No specific requirement is set in the area of mathematics, since at most colleges some mathematics is prerequisite to physics and chemistry. In general, some college level work in calculus is strongly recommended. Familiarity with the principles of statistics and their application to the analysis of data is an important asset for any medical student. A knowledge of computers and computer programming would be valuable for the application of these tools in medical education and in all forms of the delivery of health care.

Consideration should be given by the student to participation in honors courses, independent study and scientific research. These activities present opportunities for unstructured learning experiences and explorations of certain areas in considerable depth.

Electives: The remainder of the college work should be distributed throughout the humanities and social, biological, and behavioral sciences. The student should select subjects which stimulate him intellectually, challenge him to a maximum performance and contribute to his overall development and maturation. The courses may aim toward a thorough study of a single area with a general background in many areas, or may group in several related areas in the sciences or humanities.

The discriminate selection by the student of elective courses will not only increase his store of knowledge, but will help him form attitudes basic to a professional career in medicine. Development of certain skills will place the student at ease in a professional school.

Extracurricular Activities: Extracurricular activities and employment both during the academic year and the summers can make important contributions to an individual's development. Experience in medical and paramedical areas often contributes toward an understanding of health care delivery problems and helps to solidify the basis of the student's motivation toward a career in medicine.

Discipline in study is essential. Efficient skill in accurate, rapid, interpretive reading should be mastered. Methods of observation and collection of data, evaluation deduction, and interpretation of findings are taught in psychology, physics, and other sciences. The analysis and organization of a set of observations into its simple components and the synthesis of many fragments of data into a working hypothesis on which a plan of action

can be based are taught in many courses. The student should keep these objectives in mind throughout his preprofessional training.

A high degree of skill in the use of spoken and written language should be developed accurately to extract a story, systematically to record facts for the use of others, and precisely to transmit instructions. These techniques are taught in courses in English literature and composition. The study of foreign languages also illustrates the exact meaning of words and the use of subtle differences in shading.

Communication through symbols is taught in chemistry, physics, and mathematics. Proficiency in typing increases the speed and accuracy of communication and will aid the student in his professional work.

Medicine deals with individuals who react to their physical, social, and cultural environment. Functional derangement induced by the interplay of emotional factors in the individual or by external influences from the environment can be detected by subtle methods. The study of emotional factors is taught in philosophy, religion, psychology, and the fine arts, while the study of social forces is considered in history, literature, economics, sociology, and law. Since all of these factors may induce reactions during physical illness which exceed that produced by the disease itself, the study of principles in these areas is most important to the education of a physician.

MEDICAL COLLEGE ADMISSION TEST

Every applicant must take the Medical College Admission Test, preferably in the spring preceding the submission of his application. The test is given twice yearly in many colleges and universities. For further information about the test, write to The Psychology Corporation, 304 East 45th Street, New York, New York 10017.

APPLICATION AND ACCEPTANCE PROCEDURES

Admission to the College of Medicine is highly competitive and the applicant is appraised on the basis of information gained from previous academic records, scores on the Medical College Admission Test, recommendations by premedical advisors and teachers, and personal interviews. The College of Medicine endeavors to select those students who appear by present standards the most qualified for a career in medicine. Similarly, the student is expected to make a careful choice of that institution which offers an environment and program most suited to his interests and personality. A personal visit to the school of his choice should be most helpful.

1.) The College of Medicine is a participating institution in the American Medical College Application Service (AMCAS). The AMCAS application form may be obtained after June 1

from any of the participating institutions or from the Office of the Registrar, University of Florida, Gainesville, Florida 32611.

2.) After careful screening of the initial applications by the Medical Selection Committee, promising applicants will be sent an additional formal application requesting information not included on the AMCAS application. The completed form should be returned directly to the University of Florida and arrangements made for submission of a preprofessional committee evaluation or letters of recommendation. This second phase requires an application fee of $15 from all students not previously enrolled in the University of Florida. This fee is not refundable. All materials should be submitted as early as possible, but no later than December 1 of each year.

3.) Following committee review of all of the application materials, interviews with members of the Medical Selection Committee will be arranged for competitive applicants. These interviews are usually held on Saturdays at the University of Florida College of Medicine campus in Gainesville.

4.) After receipt of an acceptance, a written reply to the College of Medicine is expected within two weeks. There is wide variety in acceptance dates of different medical schools and therefore some students may wish to reconsider after filing a declaration of intent. This is a perfectly acceptable procedure, provided the student promptly sends written notification to every school holding a place for him.

5.) No deposit is required from accepted applicants, but if they accept the offer of a place they have an obligation to matriculate unless they are released by the school. Such release is granted automatically upon request by the student.

The above procedures are approved by the Association of American Medical Colleges.

PROFESSIONAL EDUCATION LEADING TO THE M.D. DEGREE

Once a decision has been reached by both the medical school and the applicant, the student enters the professional portion of the educational continuum. From this point on, the student will pursue his educational endeavors from the vantage point of a physician striving to achieve well-rounded capacities as a physician-humanist and scientist in his profession and community.

PHASE A

Phase A will occupy the entire first year, followed by vacation in the summer quarter. The fall quarter will be devoted to a study of cellular and molecular biology and

biomorphology. Teaching in the second and third quarters will be of an interdisciplinary, interdepartmental nature, with teaching teams drawn from both the basic and clinical departments. The course schedule may be broken down in the following manner:

Cellular and Molecular Biology will consist of lectures and discussion sessions designed to increase the student's basic knowledge of cellular structure and function. The structural aspects, metabolism and molecular biology of the mammalian cell are stressed. Topics covered include macromolecular structure, biocatalysis, cell surfaces, inborn errors of metabolism, biomembranes, and an introduction to molecular genetics. Emphasis is placed on the aspects of biochemistry and molecular biology which are related to the pathophysiology of disease.

YEAR I

<table>
<tr><th>FIRST QUARTER</th><th>SECOND QUARTER</th><th>THIRD QUARTER</th></tr>
<tr><td>CELL
BIOLOGY
(MED 540)
(MED 541)</td><td rowspan="2">HUMAN SYS. I
(MED 545)
Neuroscience
Respiratory
Cardiovascular
Hematology</td><td rowspan="2">HUMAN SYS. II
(MED 546)
Gastrointestinal
Renal
Endocrine & Reproduct
Immunology
General Pathology</td></tr>
<tr><td>BIOMORPHOLOGY
(MED 535)</td></tr>
<tr><td colspan="3">INTRODUCTION TO HUMAN BEHAVIOR
(MED 542) (MED 543)</td></tr>
</table>

Biomorphology represents an introduction to microscopic and gross anatomy of the human body. Microscopic anatomy will include the organization of the basic tissues and their structure-function relations. Gross anatomy will serve as an introduction to the anatomy of the entire body and will emphasize topographical anatomy as well as interrelations of various body compartments and systems. Both gross and microscopic portions of the course will consist of lecture, laboratory, and discussion periods.

Human Systems I will briefly introduce general physiology and pharmacology and will proceed with in depth interdisciplinary studies of systems including the nervous system, the hematopoietic system, and the respiratory and cardiovascular systems.

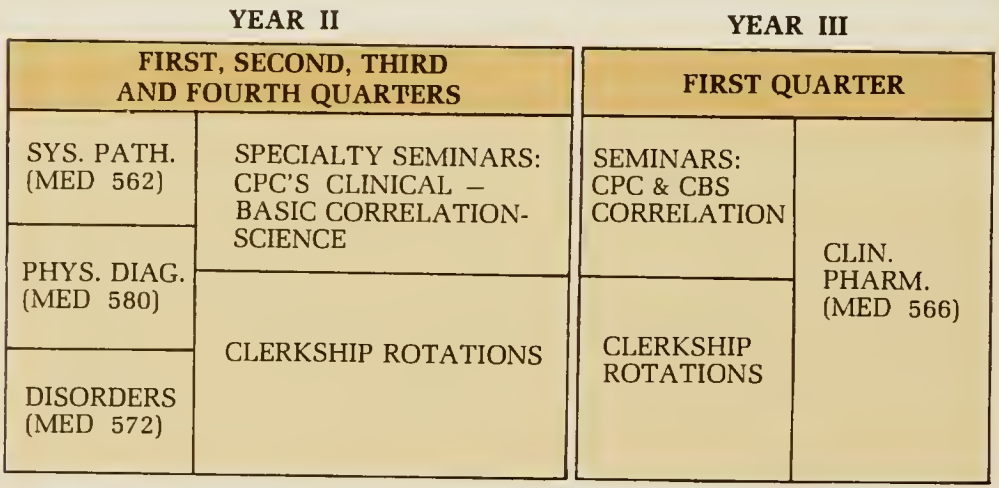
Human Systems II will consider the gastrointestinal, renal, endocrine and reproductive systems, and will also consider microbe-host interactions and the pathological consequences of infection. Again the approach will be an interdisciplinary one.

Introduction to Human Behavior will be offered one afternoon a week and will deal with interpersonal interactions and personal reactions to a variety of situations. Individual students or groups of students will interview patients under the supervision of the psychiatry and general medical-surgical faculty.

The scheduling of Phase A also allows time for the student to participate in elective programs. During the entire first year, the College of Health Related Professions offers special electives to medical students in the fields of physical therapy, occupational therapy, clinical psychology, speech therapy, and hospital administration. Electives also are available in laboratory medicine. In addition, the first year student has the option to perform investigative work with a member of the faculty.

PHASE B

Phase B is designed to give a broad experience in clinical medicine. It will occupy all of the second year and approximately half of the third. Diagrammatically, it may be represented as follows:



Initial course work will consist of *Systematic Pathology, Physical Diagnosis,* and *Laboratory Diagnosis.* Systemic Pathology will emphasize the effects of disease on the human organism and the correlation of disease with symptoms, signs, and the course of illness. Physical Diagnosis will be interpreted and will utilize anatomical and radiologic demonstrations or presentations. Experience in patient interview (psychiatry) will be provided. Laboratory Diagnosis will be taught concomitantly and will familiarize the student with clinical laboratory procedures and their interpretations.

The major portion of Phase B will be devoted to the clinical clerkships, in which groups of students will rotate among the major clinical services receiving direct patient contact. During the clerkships, the student will become an integral member of the medical team and will be responsible for his patient during all hours of the day or night.

In addition to ward rounds, two hours each week will be reserved for Clinical Pathology Conferences and for Clinical-Basic Science Seminars. These sessions will be multidisciplinary in scope and will aid the student in correlating clinical and basic science information.

A four-week Clinical Pharmacology course will taught at the conclusion of Phase B. This will be taught as a combined lecture and laboratory course and will occupy the full-time attention of the student. The student will return to the multidisciplinary laboratories at this time.

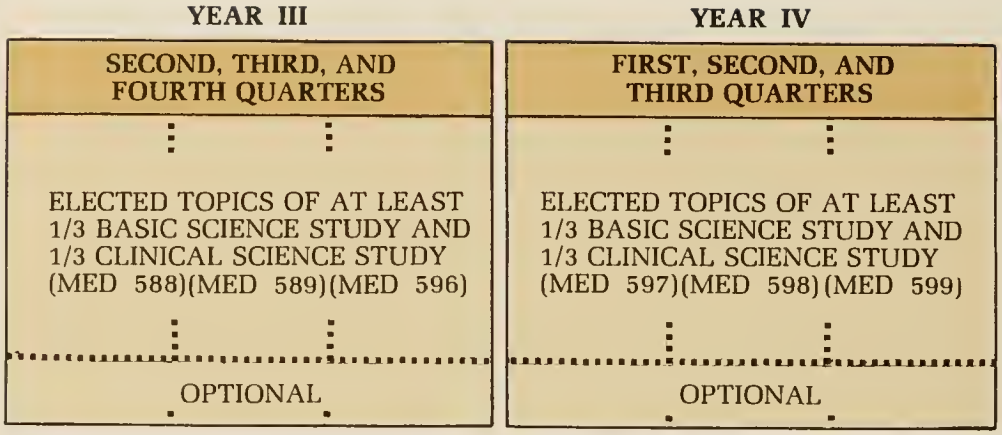
PHASE C

Phase C occupies the last 18 months of the curriculum and consists of elective experiences. The principal requirement placed on the student is that he devote at least one-third of this period to significant basic science study and one-third to clinical study.

The student thus will be able to design an experience which could permit a full year in a clinical or basic science area, an early experience related to his career choice, or an exploration of his interests among several career choices.
Considerable freedom will be permitted the student in designing his program, but the choices must be made carefully, in conjunction with the student's faculty advisors.

The science requirement can be met by several different methods: (1) by registration in formal courses in the basic science departments, (2) by engaging in a research laboratory project with a member of the faculty, and (3) by engaging in a group project supervised by the faculty. The student also may elect to satisfy the science requirement in one of the other colleges, provided he receives prior approval from his advisors and the dean.

Clinical assignments are available in all of the major disciplines of medicine. The student



may work as an advanced clerk, assuming greater responsibilities than in Phase B, or in special cases he may qualify for internship at an earlier time.

EVALUATION

Students entering the program of the College of Medicine are highly motivated and are considered graduate students in a program of professional education. They are preparing themselves for a career requiring excellence of scholastic endeavor, moral integrity, sound judgment, intellectual curiosity and above all, a drive to continue their education vigorously after graduation. It is hoped that the system of evaluation will assist them in attaining their objectives.

Since the evaluation of the student must provide information on both the student and the educational program, new policies for evaluation were instituted at the same time the new curriculum was implemented.

There are three major components of the evaluation system, namely project tests given by the various teaching units throughout the program, National Board Examinations Parts I and II to be administered during the first six months of Phase C and progress reports prepared by the members of the faculty.

Grades submitted by the faculty of the various curricular units, and the scores of the National Board Examinations will be the information used by the Academic Status Committee in preparing recommendations regarding promotion, graduation, and general ranking of students.

Students may, at their request, receive grades as submitted to the Office of Student Affairs. Grades submitted to the registrar will consist of "P" (pass) or "U" (unsatisfactory).

At the end of each quarter, the Academic Status Committee will review each student's performance on the basis of his grades and the comments by the faculty and recommend to the Dean a suitable course of action. 1) A grade of P- is passing, but connotes unsatisfactory progress. 2) PROBATION: Probationary status occurs when a student's performance is marginally passing as determined by the Academic Status Committee. A student may be removed from probation after he or she demonstrates improvement in subsequent course work. Failure to improve performance may result in dismissal or continuing probationary status at the discretion of the Academic Status Committee. 3) Any student receiving unsatisfactory grades in fifty percent or more of the hours in a quarter, or P- grades in two-thirds or more of the total phase course work will be automatically dismissed. 4) A student has a right to appeal dismissal to the Academic Status Committee within two weeks after receiving written notification. The Academic Status Committee will prepare a ranking of the students to be used for recommendations for internship applications and for Alpha Omega Alpha membership.

The Academic Status Committee will recommend to the Dean those students who have satisfactorily met its requirements and are eligible for graduation. Superior students may be recommended for graduation with honors. Nomination and selection of students will be made by the faculty. Excellence of different types in varied fields will be considered, such as superior academic work, outstanding student research and thesis, and other special achievements.

GRADUATE AND POSTGRADUATE PROGRAMS

GRADUATE EDUCATION IN THE MEDICAL SCIENCES

Programs Leading to the Ph.D. and M.S. Degrees

The educational continuum of the medical sciences is designed to provide flexibility in terms of the type of degree which may be earned as well as the type of subject matter which may be included in the individual curriculum.

Programs leading to the Ph.D. degree in medical sciences are offered by the College of Medicine through the Graduate School of the University. The programs offered by the Departments of Immunology and Medical Microbiology, Neuroscience, Pathology, Pharmacology and Therapeutics and Physiology are intended to give talented individuals

an opportunity to engage in a career of research and teaching in the basic scientific medical disciplines. The Department of Biochemistry also offers a program leading to the Ph.D. in biochemistry.

The M.S. degree in medical sciences is offered by the Departments of Immunology and Medical Microbiology, Pathology and Physiology. The Department of Biochemistry offers the M.S. degree in Biochemistry.

The prime requirements for admission to these programs are personal integrity, motivation, and general scholastic achievement. Candidates must satisfy the general requirements for admission to the Graduate School and produce a satisfactory score on the Graduate Record Examination. A reading knowledge of a foreign language is required. Candidates should have an undergraduate major in a biological or physical science, but other undergraduate areas of concentration appropriate for study in the basic medical sciences are engineering, and mathematics. In order to remedy deficiencies in their backgrounds, some candidates may find it necessary to take occasional undergraduate courses even though they hold the A.B. or B.S. degree required for Graduate School admission.

The completion of a satisfactory dissertation based on original research is the most important single requirement of the Ph.D. program. Most of the work involved in the dissertation ordinarily will be done in the last two years of residence, but candidates will be encouraged to begin their research in a preliminary exploratory fashion toward the end of their first year. Graduate education in the basic medical sciences is planned from an interdisciplinary point of view, but with a major in the fields of biochemistry, immunology and medical microbiology, neuroscience, pathology, pharmacology and therapeutics or physiology. A minor is not required but may be elected in any scientific discipline approved for graduate study in the University.

Graduate students have the opportunity of assisting in the teaching of medical and undergraduate course work and most students are advised to do this as a part of their training. Teaching assistantships and nonresident tuition scholarships are available to a limited number of students.

Individuals interested in graduate study should write directly to the Assistant Dean for Graduate Education or to the appropriate departmental chairman, who will give further details regarding the programs, fellowships, assistantships, and scholarships.

Medical Scientist Training Program [Combined M.D.-Ph.D. Degree]

The Medical Scientist Training Program is designed for highly qualified students who are strongly motivated toward a career in the medical sciences. This is a five to seven year program, which attempts to provide for a limited number of students an in-depth

education in a basic science discipline as well as an in-breadth experience in human biology. Successful completion of this program will enable the student to enter a career of teaching and research in a basic medical science department or pursue an internship and residency program leading to a research and teaching career in clinical medicine. It is hoped students in this program may bridge the gap between basic science and clinically-oriented careers in the medical sciences.

Candidates for this program must satisfy admission requirements of both the College of Medicine and the Graduate School. These include satisfactory scores on both the Graduate Record Examination and the Medical College Admission Test, personal qualities of high order, and superior intellectual achievement. A strong undergraduate background in the physical and chemical sciences as well as mathematics is desirable. A genuine interest in human welfare is essential.

The student will enroll in all courses for the M.D. degree. In addition, special graduate courses and seminars will be required, as determined by the student's Graduate Advisory Committee. The Graduate Advisory Committee also will assist the student in planning his curriculum, determining his progress, and guiding his research.

In most cases the student will complete the first year of medical school while initiating a research experience. During the summer quarter before beginning a 16-18 month clinical clerkship program, the student will take graduate courses and commence a research project. Graduate studies may be integrated into an extended Phase B (Basic Clinical Clerkships) and a lengthened Phase C (Elective Studies). However, the program is designed to be flexible and in all cases the program will be determined by the needs and progress of the student.

Students will be evaluated by examinations similar to those in the separate M.D. and Ph.D. programs. The Committee on Academic Status of the College of Medicine will evaluate the student's performance and recommend promotion to the next class or awarding of the M.D. degree. The Graduate Advisory Committee, in conjunction with the basic science department from which the student will receive the Ph.D. degree, will assess his graduate performance.

Applications for this program are coordinated through the Dean's Office of the College of Medicine. Candidates should specify the basic science department to which admission is sought.

GRADUATE MEDICAL EDUCATION [INTERNSHIPS, RESIDENCIES, AND FELLOWSHIPS]

All programs of internship and residency training offered in the Shands Teaching Hospital and Clinics and the VA Hospital are fully accredited and approved by the American Medical Association's Council on Medical Education and Hospitals, and are listed in the Directory of Approved Internships and Residencies. In addition, the Senate of

the University formally recognized these programs as academic non-degree programs of the College of Medicine at its meeting of June 26, 1969. The Hospitals hold maximum certification from the Joint Commission on Accreditation of Hospitals. Each of the various residency and fellowship specialty training programs has been accredited by the respective Specialty Board under the Joint Commission.

Internships: Straight internships, each 12 months in duration, are offered annually, beginning July 1, in the services of medicine, pathology, pediatrics, and surgery.

Residencies: Residencies vary in length with each of the services (between two and four years). Formal residencies are offered in anesthesiology, medicine (internal medicine), neurology, obstetrics and gynecology, ophthalmology, orthopaedic surgery, pathology, pediatrics, psychiatry, radiology and its subspecialties, and surgery (general, plastic, thoracic, neurosurgery, otolaryngology, and urology).

Stipends accompany each internship and residency. Housing at moderate cost is adjacent to the Health Center and is described on page 36.

Fellowships: A limited number of clinical fellowships are available in the various subspecialties of anesthesiology, medicine, pathology, pediatrics, psychiatry, radiology, and surgery to qualified applicants with some previous residency training and/or research pursuit. There are some traineeships which are at a slightly more advanced level pointing toward basic training for academic careers in clinical disciplines and the basic medical sciences. A postgraduate training program in laboratory animal medicine is also available.

Opportunities also exist for selected fellows to work towards the M.S. degree in the medical sciences in one of the basic science departments offering such programs.

Applications: Detailed program information and applications for these programs may be obtained by writing the appropriate departmental chairman, chief of service, or the Office of the Dean, College of Medicine.

LICENSURE

Licensure to practice medicine and surgery in Florida can be obtained by endorsement if the applicant has been certified by licensure examination of the Federation of State Medical Boards of the United States, Inc. (FLEX) or is certified by the National Board of Medical Examiners as having completed its examination; provided that said examination required shall have been so certified within the eight years immediately preceding the filing of the application for licensure. Such a license is good only if the recipient engages actively in medical practice in the state within three years after the date of issuance and continues his practice for a minimum of one year. Graduates of approved medical schools in the United States and Canada are eligible for this endorsement. In addition, graduates

of foreign medical schools who otherwise are qualified and whose credentials have been evaluated by the Educational Council for Foreign Medical Graduates (ECFMG), and who have passed the American medical qualification examination for foreign medical graduates may be considered for endorsement. The applicant must have completed at least one year of approved internship or five years in private practice in the United States, its territories or Canada. He also must be a citizen of the United States or legally have declared intention to become a citizen and have been a resident of the United States for a minimum of one year.

Since various state laws differ in regard to licensure requirements, it is the responsibility of the medical student to become familiar with the qualifications for licensure in the state or states which he or she might consider as potential locations for the practice of medicine.

CONTINUING EDUCATION

The physician's proficiency in the practice of medicine depends on his continuing education. The College of Medicine recognizes its role in assisting with this aspect of education and has designated to a member of the academic staff the responsibility for inaugurating an effective means of strengthening the educational continuum through postgraduate medical education. To facilitate such a program, a Division of Postgraduate Education has been created with office space and secretarial assistance in the Lakeshore Towers.

The Division of Postgraduate Education has surveyed the needs of the practicing physician and formed a Continuing Education Council to establish priorities in continuing education for the practicing physician. These priorities have been defined and a series of two-day workshops have been designed to meet the specific needs of the practicing physician at the community hospital level. A physician from the University, along with a practicing physician, coordinate these programs to bring both academic and practical benefits to the practicing physician. In addition, national seminars based on current relevant topics are conducted with national speakers, University personnel, and practicing physicians. The interest of the practicing physician in this program has been most encouraging, and is a tribute to the desire of the medical profession to keep abreast of the current trends in medicine.

Physicians are encouraged to participate in the Postgraduate In-Service Education Program which is designed to meet the needs of the practicing physician as he perceives them. The practicing physician, in conjunction with the University preceptor, designs a program to meet his individual needs. Pre-programmed material is available to assist in his selection of an area for concentration. In this role, he acts as both teacher and student

in the school's medical education program. The practicing physician usually spends one to two weeks in this program, for which a small tuition is charged.

Postgraduate Education personnel are available for consultation in program design to educational techniques, chart audit, and peer review as they relate to educational objectives of an individual hospital. Other programs in continuing medical education are conducted in cooperation with the Florida Board of Regents, the Florida Medical Association, the Florida Academy of Family Physicians, and a variety of medical specialty groups.

STUDENT INFORMATION

FINANCIAL CONSIDERATIONS

For enrollment in the M.D. program of the College of Medicine, registration and course fees are $1,124 per year for Florida residents and $2,524 for nonresidents. This amount is payable in accordance with University regulations. Fees and method of payment are subject to change.

The Registration Fee includes a Student Health Fee and a Student Activity Fee for each of the quarters. Most of the service and facilities of the Student Health Services are available to students without charge. A group insurance program sponsored by the Student Government is available at a very reasonable cost. The Activity Fee covers the student's attendance at a wide variety of social, athletic, and cultural events which are offered by the University.

Registration dates for each class in the College of Medicine are set by the Registrar's Office and the students are notified when their group is expected to complete registration. These fees must be paid in accordance with dates published in these instructions or they are increased by $25.

Students who are interested in doing work toward an advanced degree in the medical sciences should consult the Bulletin of the Graduate School for information concerning tuition and fees.

Textbooks and instruments needed by a first-year student will require an expenditure of about $400-$600. Purchase of a microscope will not be required as the College of Medicine through a special fund has established a microscope bank and provides each entering student with a microscope on a loan basis. If desired, a student may purchase a used microscope from an upperclassman or a new one through the Medical Book Store, a branch of the University Book Store, at a cost of approximately $800.

The minimal annual cost for a single Florida resident is $4,400.

SCHOLARSHIPS

Avalon Foundation Scholarship Fund: This fund, made possible by grants from the Avalon Foundation, is available for a few non-refundable grants to outstanding medical students, and to outstanding candidates for medical school who have been accepted for admission. These grants are usually made in the form of tuition scholarships.

Bythewood & Baker Memorial Scholarship for Women Medical Students: This endowed

fund, established in 1968 by Miss Martha Isabel Mays, is to be used to provide financial assistance to selected women medical students.

Faculty Scholarship Fund: Members of the faculty of the College of Medicine make individual yearly contributions toward the funding of this scholarship. The recipient may be selected from the accepted applicants to the College and from medical students nominated by faculty members on the basis of truly outstanding performance.

Health Professions Scholarship Program: Scholarships to enable talented students from low-income families to undertake the course of study required to become physicians are provided under the Health Professions Educational Amendments of 1965 (Public Law 89-290). These scholarships are available only to such students who without this financial assistance would not be able to pursue the required studies, and who have previously received this assistance in medical school.

Genevra Todd and Henry E. Meleney Memorial Award, established originally by the late Dr. Henry E. Meleney in memory of his wife, is to be given to a medical student for outstanding achievement during the first year of medical study.

Avonelle C. Noah Scholarship Fund: An endowment fund was established in 1968 under the terms of the will of Mrs. Avonelle C. Noah. The income from this fund is to be used to assist worthy students in the College of Medicine.

Wheat Medical Scholarship Fund: An endowment fund was established in 1967 under the terms of the will of Mrs. Eva H. Wheat. The income from this fund is to be used to assist worthy male medical students (who are selected by the College of Medicine) to continue their education.

Joseph and Lee Wolfe Medical Scholarship: Established in 1968, this annual scholarship award is to be given at the discretion of the faculty to assist worthy students in the College of Medicine.

SCHOLASTIC AWARDS

Alpha Omega Alpha Honor Medical Society: The Beta Chapter of Florida was installed at the University of Florida College of Medicine on May 9, 1960. A small number of students of the junior and senior classes are eligible for membership. Selection is based upon high academic standing, personal and professional character, and promise for future contributions to medicine.

The John Gorrie Award, donated by Dr. Theodore F. Hahn, Jr., is presented each year to the graduating medical student who, in the opinion of the faculty of the College of

Medicine, is the best all-around student showing promise of becoming a practitioner of the highest type.

Upjohn Achievement Award is offered through the Upjohn Company Achievement Award program to the graduating medical student who achieves the highest academic standing during the four years in medical school.

The William C. Thomas, Sr. Award is given each year to an outstanding student with an interest in obstetrics and gynecology. The award is made by the Florida Obstetric and Gynecologic Society.

The Faculty Award for Research is given to the graduating medical student who has made the most outstanding contribution through research during the course of medical school.

The Luther W. Holloway Award was established by the Florida Pediatric Society in honor of the late Dr. Luther W. Holloway to be awarded to the medical student showing the greatest proficiency in child health.

The Hugh and Cornelia Carithers Award, an endowed award established by Drs. Hugh and Cornelia Carithers of Jacksonville, is presented each year to a graduating student on the basis of over-all accomplishments and aptitudes in child health and human development.

The University Medical Guild Scholarship Awards are presented each year by the University Medical Guild to a medical student who, at the end of his third year, is judged to be outstanding scholastically and to an entering student on the basis of need and scholastic merit.

The Watson Clinic Award is to be presented each year by the Watson Clinic of Lakeland to the medical student chosen by the faculty for productive effort and scientific contribution.

The Dean Mitchell Baker Award, established by Dr. and Mrs. Roy M. Baker of Jacksonville in memory of their son, is awarded each year to the graduating medical student for excellence in the field of pediatric cardiology.

The Roche Award is awarded each year to an outstanding medical student in the second-year class, based on scholarship and general performance.

Joel Cohen, Patricia Ann Maddalone Memorial Award was established in memory of Joel Cohen who demonstrated superior skill, imagination, and industry in the laboratory research of drug hypersensitivity, and is to be presented each year to that student demonstrating outstanding proficiency in clinical or laboratory investigation in the field of immunology.

Book Awards consisting of presentations each year to outstanding members of the four classes in the College of Medicine are made by Lange Medical Publications, Merck & Company, and C.V. Mosby Company.

Roger G. Schnell Neurology Book Award, established by Dr. Roger G. Schnell of Ft. Lauderdale, is to be given to a medical student who has shown excellence in the field of clinical neurology.

LOAN FUNDS

College of Medicine Loan Funds: Loans from these funds are available to students enrolled in the College of Medicine who are in good academic standing, have completed one quarter of academic work, and can show sufficient evidence of financial need. Long-term loans are limited to $1,000 per year. Interest (at four per cent) begins at graduation and continues until repayment is completed. Repayment ordinarily begins two years after graduation, but deferment can be arranged if further medical training is planned. Short-term loans are available for emergencies, but must be repaid within the school year. Equipment loans can be made to spread over a period of four years.

These funds have been made possible by grants from the Avalon Foundation, the W.K. Kellogg Foundation, the Selby Foundation, the Patrick J. O'Shaughnessy Memorial Fund, the John J. Tigert Memorial Fund, the Frederick F. Kumm, M.D., Memorial Loan Fund, the Helen Stargardt Memorial Loan Fund, the George M. Green, M.D., Memorial Loan Fund, the Algia Collins, M.D. Memorial Fund, the Publix Scholarship Loan Fund, and by gifts from several organizations and individuals within the State of Florida. Loans are administered by the College of Medicine's faculty-comprised Loan Committee.

AMA-ERF Medical Education Loan Guarantee Program: The goal of the American Medical Association Education and Research Foundation is to help eliminate the financial barrier to medicine for all who are qualified and accepted by an approved training institution. It is designed to provide a means of financing a substantial portion of the cost of a medical education for students who have performed acceptably in the first year of medical study. The Loan Program for medical students, interns, and residents is the result of a cooperative effort by American medicine and private enterprise. As much as $1,500 may be borrowed annually. These loans are repayable, with interest, after medical training is completed.

Health Professions Educational Assistance Act: The Health Professions Educational Assistance Act of 1963 provides student loans up to a maximum of $3,500 in one academic year. The loans are based on financial need, and are repayable within ten years after graduation. This period begins three years after the student ceases to pursue a full-time course of study at a school of medicine. Interest rates, specified by the Secretary of the

Treasury during June of each year, are three per cent per annum, or the designated federal rate at the time the loan is made, whichever rate is the greater.

Florida Medical Foundation Loan Guarantee Plan: Established in 1965 to provide readily available financial aid to Florida medical students, interns, and residents, the Plan is designed to permit maximum flexibility for the borrower's needs, and simplified administration for the lender. To be eligible, borrowers must be citizens of Florida and have completed their first year in an approved medical school. A maximum of $2,000 per year for three years may be borrowed with repayment to begin the fifth month after completion of internship or residency. A seven per cent simple interest rate prevails on all loans under the Plan.

Bernard J. Wagner Loan Fund: Established in 1968 this trust fund is for the purpose of assisting students of accredited medical schools to continue with their education. Preference shall be given to those who have completed the most years in medical school. Loans are repayable with interest at a rate never to exceed that prevailing rate at the time the loan is made on student loans enacted by Congress.

United Student Aid Funds: Participation in this loan fund is made possible through the use of the Ronald A. Julian Memorial Fund. USA Funds is a private, nonprofit corporation which endorses low-cost loans made by hometown banks to needy college students. Graduate students may borrow up to $2,000 per year — up to a combined total of $4,000 — with repayments beginning the fifth month after completion of graduate education. No notes under this plan may bear more than seven per cent simple interest. This interest starts when the loan is made.

Hugh and Mable Wilford Scholarship Fund: This trust fund was established in 1970 for the purpose of making loans available to assist worthy and needy students to attend the University of Florida College of Medicine. This loan fund will be administered in accordance with procedures established for the Health Professions Student Loan Program.

Robert Wood Johnson Foundation Student-Aid Program: Established in 1972 and designed to respond to the need for improving access to physician services in rural areas and inner-city poverty areas, this program furnishes funds to encourage enrollment of women students, students raised in rural communities, and students from minority ethnic backgrounds.

Other Sources: Many students have received financial support from local sources. These may be discovered by inquiries addressed to voluntary health agencies, medical organizations, service clubs, church organizations, or trust departments of banks.

FELLOWSHIPS

Student Research Fellowships: These fellowships are made possible by grants from voluntary health agencies in Florida, pharmaceutical firms, the National Institutes of Health, and other agencies. The purpose of the fellowships is to encourage research pursuits by medical students and to enable them to undertake experimental investigations during the summer, under the guidance of a faculty member. Such studies are helpful to the student in determining the degree of emphasis he wishes to place on certain pursuits, and provide opportunity for additional training in the intellectual techniques of analysis and synthesis. Special fellowships may be awarded to permit full-time research for a period of one year between medical studies, or to allow research as a full-time resident after graduation, whether working toward a specialized or advanced degree or not. A limited number of fellowships are available for the summer preceding matriculation in the first year for those students who wish to continue research already begun, or to begin experimental work at the earliest moment. Selection for these fellowships is made by a faculty committee after the student has obtained a sponsor and submitted a written research proposal.

LIVING ACCOMMODATIONS

Housing on campus should be arranged through the Office of the Director of Housing, University of Florida, Museum Road at S.W. 13th Street, Gainesville, Florida (392-2181). Beaty Towers have been reserved for upper division and graduate students with suites at $195 per quarter per student. For married students, apartments in Corry, Diamond, Schucht Memorial, University Villages are available. These are modern two-story buildings of brick construction containing one, two, and a few three-bedroom apartments ($70-$95 per month). The 104 units comprising Schucht Village are adjacent to the Shands Teaching Hospital and Clinics and priority is given, when possible, to housestaff and upperclass medical students who have clinical responsibilities requiring immediacy to the Health Center. To secure favorable consideration, application for on-campus housing should be made immediately upon acceptance to the College of Medicine.

Private homes and privately operated rooming houses and apartments provide many accommodations for students. The University's Division of Housing also offers a referral service through the Off-Campus Housing Section where current listings are available. These listings are not compiled for mailing since they are subject to constant change, and mutually satisfactory rental arrangements can be made normally only by the student after a personal inspection of facilities and a conference with the landlord. Initial contacts should be made at least thirty days before school begins.

COURSE DESCRIPTIONS

PHASE A

The following courses comprise the basic medical science background (Phase A) of the curriculum for the M.D. degree, and are offered to medical and dental students during the first year. Many are available to graduate students in the University, although the number of students who can be accepted is limited by laboratory facilities

MED 535 BIOMORPHOLOGY
12 credits. An introduction to microscopic and gross anatomy of the human body. Microscopic anatomy will include organization of basic tissues, their structure-function relations with gross anatomy serving as introduction to anatomy of entire body and emphasizing topographical anatomy as well as interrelations of various body compartments and systems. Course will consist of lecture, laboratory, and discussion periods.

MED 539 INTRODUCTION TO MEDICAL SCIENCES
4 credits. Patient care presentations dealing primarily with problems relating to metabolic diseases in man, followed by in depth discussions of the basic phenomena designed to help students understand the pathophysiology of the diseases.

MED 540 CELL BIOLOGY
9 credits. Lectures, discussion, and tutorial sessions to increase the student's basic knowledge of cellular functions in health and disease. The structure and molecular biology of the mammalian cell are stressed, including such things as virus-cell interaction, inborn errors of metabolism, and bacterial growth.

MED 541 CELL BIOLOGY LABORATORY
1 to 6 credits. Corequisite: MED 540. Course is project oriented to allow individual or small group work with a faculty member. Registration by permission only.

MED 542 INTRODUCTION TO HUMAN BEHAVIOR I
3 credits. Patients' interactions with disease, treatment, family, and community are explored. Interviews with patients to develop skills in communication along with appreciation of subjective experiences of both patients and doctors. Community program developments and selected behavioral science contributions to health care are included. Creative collaboration between students and faculty encouraged to meet the increasingly urgent psychosocial concerns of medicine.

MED 543 INTRODUCTION TO HUMAN BEHAVIOR II
3 credits. Continuation of MED 542.

MED 545 HUMAN SYSTEMS I
15 credits. Introduction to tissues of the human body; detailed study of systems, including neuro-behavioral, musculoskeletal, respiratory, and cardiovascular. The anatomy, physiology, biochemistry, and pharmacology of these systems, including representative pathologic phenomena.

MED 546 HUMAN SYSTEMS II
15 credits. Prerequisite: MED 545. The anatomy, physiology, biochemistry, and pharmacology of the gastrointestinal, hematologic, renal, endocrinologic, and reproductive systems, including representative pathologic phenomena.

PHASE B

Most of the following courses involve detailed day-to-day care of patients in the Shands Teaching Hospital and Clinics. They require highly specialized professional preparation as well as large amounts of time which must, of necessity, be somewhat irregularly

scheduled as particular patients are available. These courses, therefore, are limited to candidates for the M.D. degree. The individual clinical courses offered are integral parts of the teaching program in the Phase B portion of the curriculum. With the exception of MED 562, 566, 572 and 580, these courses are offered to parts of the class in rotation for periods of approximately two months.

MED 562 SYSTEMIC PATHOLOGY
3 hours lecture and conference, and 8 hours laboratory. 11 credits. Prerequisites: MED 561 and completion of first year of medical school. Functional and anatomical pathologic changes are correlated with etiology, pathogenesis and clinical manifestations of human disease. Participation in the autopsy program is required.

MED 566 ADVANCED PHARMACOLOGY
One month. 6 credits. Lectures, conferences and laboratory. Fundamentals of drug action are studied with emphasis on cardiovascular, neurological, and endocrine systems. Joint teaching in basic aspects of appropriate clinical areas (e.g., anesthesia, ophthalmology) will be conducted.

MED 572 DISORDERS OF THINKING, EMOTION AND BEHAVIOR
4 credits. This course enables second year medical students to improve interviewing techniques to learn symptomatic psychopathology, to conduct comprehensive examinations and interrelate symptoms and to become familiar with descriptive and dynamic aspects of common clinical syndromes and diagnostic categories. Small group teaching is devoted to lecture-demonstrations and clinical work.

MED 580 BASIC CLINICAL CLERKSHIP
Two months. 7 credits. With the participation of all clinical departments the student is introduced to the common and basic components of physical and laboratory examinations, techniques of interview and history taking, and care of the patient in all fields of medicine.

MED 583 COMMUNITY HEALTH CLERKSHIP
8 credits. This is a five week clinical rotation in which students participate in health care in various community settings. Experiences in rural areas, big city ghettos, or preceptorships with practicing physicians will be individually arranged. Whenever possible the student will live in the community he serves so he can see first hand medical and health problems as they exist in different communities as well as the success and shortcomings of present day care in meeting them. The community health clerkship will be coordinated with the medicine and pediatric clerkship.

MED 585 PSYCHIATRIC CLERKSHIP
Two months. 12 credits. Observation and treatment of psychiatric patients in the Teaching Hospital and Outpatient Clinic. Experience and instruction is given in the application of this material to the practice of medicine.

MED 586 OBSTETRICAL AND GYNECOLOGICAL CLERKSHIP
Two months. 12 credits. Participation in obstetric and gynecologic management of women in the Shands Teaching Hospital and Clinics provides a learning experience with an appropriate degree of responsibility. The student focuses attention on the subject of biology and reproduction.

MED 591 MEDICAL CLERKSHIP
Two months. 12 credits. Active participation under supervision in ward and clinic care of patients. Close tutorial relationship with staff in lectures, conferences and teaching rounds. A program in clinical therapeutics is conducted jointly with the Department of Pharmacology and Therapeutics.

MED 592 PEDIATRIC CLERKSHIP
Two months. 12 credits. Participation in medical and surgical management of infants and children in the Teaching Hospital, Ambulant Wing, Emergency Room, and Pediatric Clinic provides a learning experience with an appropriate degree of responsibility. The student focuses attention on the role of biological and emotional growth in the expression of illness in children.

MED 593 SURGICAL CLERKSHIP
Two months. 12 credits. Experience in the care of surgical patients in the ward and in the operating room. Instruction in surgical biology is provided by a series of daily seminars and lectures.

MED 594 ANESTHESIOLOGY CLERKSHIP
One week. 3 credits. Course provides necessary cognitive, motor and attitudinal skills to approach the patient suffering from acute cardiopulmonary collapse; teaches skills necessary for all physicians and the sphere of influence of anesthesiologists within and outside of the operating room.

PHASE C

Within the general framework of Phase C, a student will register for 20 credit hours of which 4-20 hours are chosen from Elected Topics and the balance from other offerings in the College of Medicine and the University. The total curricular program must be approved by the College of Medicine prior to registration.

MED 588 ELECTED TOPICS I
4-20 credits. Offered by all medical science and clinical departments of the College as an opportunity for concentrated work in a field of particular interest to the student. Individual research, a preceptorship, or clinical clerkship in the College or in another medical center in this country or abroad may be elected.
MED 589 ELECTED TOPICS II
4-20 credits. Same as MED 588.
MED 590 SELECTED TOPICS
12 credits. Same as MED 588
MED 594 SELECTED TOPICS II
12 credits. Same as MED 588
MED 595 SELECTED TOPICS III
6 credits. Same as MED 588
MED 596 ELECTED TOPICS III
4-20 credits. Same as MED 588.
MED 597 ELECTED TOPICS IV
4-20 credits. Same as MED 588.
MED 598 ELECTED TOPICS V
4-20 credits. Same as MED 588.
MED 599 ELECTED TOPICS VI
4-20 credits. Same as MED 588.

GRADUATE COURSES IN THE MEDICAL SCIENCES

Programs leading to the M.S. and Ph.D. degrees in the medical sciences (with a major in immunology and medical microbiology, neuroscience, pathology, pharmacology and therapeutics, or physiology) are offered by the College of Medicine. The M.S. and Ph.D. degrees in biochemistry are offered by the Department of Biochemistry. Training in these scientific disciplines is planned to give experience in research and teaching, rather than in clinical practice for which the M.D. degree program is designed.

Although no graduate major may be completed without adequate course work at the 600 level or higher, these 500 level courses also are available for graduate credit as part of the candidate's major.

MED 437 INTRODUCTION TO MEDICAL SCIENCES SEMINAR
4 credits. Patient care presentations dealing primarily with problems relating to metabolic diseases in man, followed by in depth discussions of the basic phenomena designed to help students understand the pathophysiology of the diseases. Enrollment restricted to students accepted into the Basic Biological and Medical Sciences Program.

MED 501 GROSS ANATOMY
6 credits. The basic structure and mechanics of the human body are taught primarily in the laboratory but supplemented with lectures, conferences, and demonstrations, as needed.

MED 502 APPLIED GROSS ANATOMY
7 credits. A continuation in depth of MED 501 with emphasis on applied and correlative aspects.

MED 503 MICROSCOPIC ANATOMY
6 credits. The microscopic structure of the cells, tissues and organs of the human body is taught. Correlation of the structure and function is strongly emphasized. Fresh tissues are used when profitable and each student is issued a loan collection of prepared slides. Recent advances in knowledge of cellular structure, acquired by the use of the phase and electron microscopes, are included.

MED 504 NEUROHUMORS AND BEHAVIOR
4 credits. Prerequisite: PSY 416 or equivalent. Actions of putative neurotransmitters and neuromodulators and drugs on animal behavior. The localization, metabolism, storage, release and physiological action of each group of neurotransmitters will also be reviewed.

MED 505 INTRODUCTION TO THE NEUROSCIENCES
4 credits. Prerequisite: ZY 202 or equivalent and consent of instructor. Structure and basic functions of the mammalian nervous system. Human neuroanatomy, including peripheral and central structures from spinal cord to cerebral cortex. Fundamental concepts of neurophysiology, including initiation, propagation and synaptic transmission of the nerve impulse. Sensory, motor, and integrative activities. Elements of neurochemistry and neuropharmacology.

BCH 511 BIOCHEMISTRY
4 credits. Prerequisite: Organic chemistry. The first half of 511-512. Lectures, structure, function and metabolism of cellular constituents. Topics considered will include structure, biosynthesis and function of macromolecules; bioenergetics; enzyme mechanisms; intermediary metabolism; transport processes; biological control mechanisms.

BCH 512 BIOCHEMISTRY
4 credits. The second half of 511-512.

MED 518 VISION
4 credits. Prerequisite: Consent of instructor. The visual process and supporting systems approached from the orientation of human vision.

MED 520 PHYSIOLOGICAL MECHANISMS
5 credits. Prerequisites: General chemistry, physics, and biology. Basic mechanisms of mammalian physiological processes; circulatory and respiratory mechanics; transport, distribution and storage of substances in spaces and compartments of the body; excitability of tissues; muscular contraction; sensory mechanisms; reflex activity.

MED 521 METHODS AND TECHNIQUES OF PHYSIOLOGY
2 credits. Techniques and exercises in experimental physiology; measurements of circulatory, respiratory, renal, endocrine, nervous, and muscle function.

MED 551 INTRODUCTION TO THE STUDY OF MICROORGANISMS
7 credits.

MED 554 MEDICAL PARASITOLOGY
2 credits. Introduction to the major groups of animal parasites infecting man with special emphasis on life history, epidemiology, and laboratory diagnosis.

MED 566 ADVANCED PHARMACOLOGY
One month. 6 credits. Lectures, conferences and laboratory. Fundamentals of drug action are studied with emphasis on cardiovascular, neurological, and endocrine systems. Joint teaching in basic aspects of appropriate clinical areas (e.g., anesthesia, ophthalmology) will be conducted.

BCH 578 CHEMISTRY OF BIOLOGICAL MOLECULES
4 credits. Prerequisites: Organic chemistry (CY 373 or CY 579), physical chemistry (CY 453 or CY 342, or consent of instructor). Mechanistic organic biochemistry. Emphasis on model systems, enzyme active sites, and physical and organic chemistry or biomacromolecules.
BCH 579 PRINCIPLES OF MOLECULAR BIOLOGY
4 credits. An alternative to BCH 578 with emphasis on the chemical aspects of molecular biology. Lectures, assigned readings and directed discussion on DNA replication and function, RNA synthesis and its regulation, specific protein syntheses as expressions of genetic information. Classic and contemporary experiments in eukaryotic and prokaryotic systems, illustrative of the main aspects of molecular biology will be dealt with in detail.

The following courses are offered by each participating department. Most of these courses, as well as others listed below, are also available to qualified graduate students from other divisions of the University.

MED 630 RESEARCH IN MEDICAL SCIENCES
1 to 15 credits. May be repeated for credit. Supervised research other than that toward fulfillment of the thesis or dissertation research in Departments in Biochemistry, Immunology and Medical Microbiology, Neuroscience, Pathology, Pharmacology & Therapeutics and Physiology.
MED 697 SUPERVISED RESEARCH
1 to 5 credits. Credit not applicable toward degrees. May be repeated.
MED 698 SUPERVISED TEACHING
1 to 5 credits. Credit not applicable toward degrees. May be repeated.
MED 699 MASTER'S RESEARCH: BIOCHEMISTRY, IMMUNOLOGY AND MEDICAL MICROBIOLOGY, NEUROSCIENCE, PATHOLOGY, PHARMACOLOGY & THERAPEUTICS, AND PHYSIOLOGY
1 to 17 credits.
MED 799 DOCTORAL RESEARCH: BIOCHEMISTRY, IMMUNOLOGY AND MEDICAL MICROBIOLOGY, NEUROSCIENCE, PATHOLOGY, PHARMACOLOGY & THERAPEUTICS, AND PHYSIOLOGY
1 to 17 credits.

BIOCHEMISTRY

The Department offers programs leading to the Ph.D. and M.S. degrees in biochemistry. Ordinarily, candidates for the M.S. degree alone will not be accepted.

Prerequisites: Since biochemistry is a multi-disciplinary field, the undergraduate major may be in related biological and physical sciences. Required courses include general, organic, quantitative and physical chemistry and at least 8 credits in physics and in biology. Calculus is recommended. Pre-baccalaureate courses in biochemistry are not accredited for the graduate program. Any deficiency in the prerequisites must be satisfied as soon as possible after entering Graduate School. Doctoral candidates are required to take a core of biochemistry courses which include BCH 601, BCH 602, BCH 603, MED 615, MED 616, MED 617. Depending upon the interests and background of the student additional courses are recommended from the following list: BCH 578, BCH 606, BCH 612, MED 722, MED 723 and MED 724.

The course of graduate study for doctoral candidates also includes advanced organic and physical chemistry, physiology, microbiology and genetics.

MED Courses Available for Graduate Major Credit in Biochemistry:

MED 615 RESEARCH METHODS IN BIOCHEMISTRY
2 to 6 credits. Prerequisites: BCH 601, BCH 602, BCH 603. Only by special arrangement. Biochemical research in which the student refines his research techniques in physical biochemistry, intermediary metabolism, radioisotopes, etc. under supervision of a staff member. May be repeated with change of content up to a maximum of 12 credits.

MED 616 BIOCHEMISTRY SEMINAR
1 credit. Required of graduate students in biochemistry; open to others by special arrangement. Research reports and discussions of current research literature are given by the departmental staff, invited speakers, and graduate students.

MED 617 SPECIAL TOPICS IN BIOCHEMISTRY
2 credits. Prerequisite or corequisite: BCH 601, BCH 602, or BCH 603. Supervised study in publications in specific areas of biochemistry, with informal weekly conferences, reports and lectures; individual faculty in charge of the course on a rotating basis. May be repeated with change of content up to a maximum of 12 credits.

MED 721 BIOCHEMISTRY OF DISEASE
3 credits. Prerequisites: General courses in biochemistry. The molecular basis of human pathobiology. The biochemical mechanism underlying selected disease states.

The following courses are being offered as part of the *Program in Molecular Biology* (See Graduate Catalog).

MED 722 MOLECULAR BIOLOGY 1
4 credits. Prerequisites: General course in biochemistry. Chemical and physicochemical characteristics of the molecules concerned with heredity, gene replication, and mutation, and of their biosynthesis and function.

MED 723 MOLECULAR BIOLOGY 2
4 credits. Prerequisites: General course in biochemistry. Biochemistry of nuclei, ribosomes, mitochondria, chloroplasts, Golgi bodies, lysosomes, cell walls and membranes; compartmentation and integrated cellular function.

MED 724 MOLECULAR BIOLOGY 3
4 credits. Prerequisites: General course in biochemistry. The relationship between cell structure and function: 1) organization of chromosomes, RNA synthesis, and translation of the genetic code into functional entities; 2) organization of cellular membranes; 3) ultrastructure, function, and biosynthesis of subcellular organelles; 4) regulatory mechanisms of the cell; correlation of *in vitro* and *in vivo* experiments.

MED courses numbered 615 through 617, and 721 through 724 are identical with BCH courses of the same number.

BCH Courses Available for Graduate Major Credit in Biochemistry:

BCH 601 BIOCHEMICAL STRUCTURE AND FUNCTION
3 credits. Prerequisite: Organic chemistry; corequisite: Physical chemistry. Structure, function and metabolism of cellular constituents. Topics considered will include: structure, biosynthesis and function of macromolecules; bioenergetics; enzyme mechanisms; intermediary metabolism; transport processes; biological control mechanisms.

BCH 602 METABOLISM
3 credits. Continuation of BCH 601.

BCH 603 PRINCIPLES OF MOLECULAR BIOLOGY AND GENETICS
3 credits. Continuation of BCH 602.

BCH 606 RECENT ADVANCES IN BIOCHEMISTRY
2 credits. Prerequisites: BCH 601 or equivalent. Areas of biochemistry and molecular biology selected by the faculty will be discussed critically and in depth. Emphasis on current controversy and theory, data interpretations, and scientific writing. Classes held informally in small groups during each quarter, involving all biochemistry faculty on a rotating basis.
BCH 612 PHYSICAL BIOCHEMISTRY
4 credits. Prerequisites: General course in biochemistry (BCH 601 or BCH 511) and in physical chemistry. Physical chemistry and molecular structures of proteins, enzymes, and nucleic acids. Fundamentals of physical biochemistry techniques.
BCH 614 BIOGENETICS AND ENZYME MECHANISMS
4 credits. Prerequisites: BCH 601, BCH 602, BCH 603. Mechanisms of enzyme action and the energy transformations occurring in biological systems.

IMMUNOLOGY AND MEDICAL MICROBIOLOGY

The Department offers a program leading to the Master of Science and Doctor of Philosophy degrees in medical sciences with specialization in immunology and medical microbiology, including the fields of parasitology and virology. Through individual planning of course work, research and teaching, the graduate student is offered an educational atmosphere which permits him to develop skills and gain intellectual independence and initiative. The program is closely related to that of the Department of Microbiology in the College of Arts and Sciences.

The undergraduate preparation for graduate study in immunology and medical microbiology should be wide in scope and should include general biology, physics, chemistry (2 to 3 years including organics and quantitative analysis), with statistics, calculus, physical chemistry, genetics, and bacteriology recommended. A bachelor's degree in bacteriology or microbiology is not required. In Graduate School the student will at first obtain a general background in microbiology as preparation for research and teaching. The remaining course work should be arranged according to the student's interest and competence. Specialization in the following areas is offered: virology, immunology, immunochemistry, cellular immunology, infectious diseases, microbial genetics and parasitology.

MED 650 PUBLIC HEALTH MICROBIOLOGY
1 to 6 credits. Maximum 18 credits. Identical with MCY 650. Prerequisites: Permission of chairman of department and director of laboratories. References study and laboratory practice of diagnostic techniques in the Microbiology Diagnostic Laboratories of the Shands Teaching Hospital, University of Florida J. Hillis Miller Health Center, or in residence at the Bureau of Laboratories, State Department of Health, Jacksonville.
MED 651 SPECIAL TOPICS IN MICROBIOLOGY
1 to 6 credits. Identical with MCY 651. Prerequisite: 6 credits in graduate major courses. Organized study of contemporary research in a particular aspect of general microbiology. May be repeated with change of content.
MED 652 VIROLOGY
5 credits. Identical with MCY 652. Nature of viruses and mechanisms of viral replication.
MED 653 VIROLOGY LABORATORY
3 credits. Identical with MCY 653. Prerequisite or corequisite: MED 652. Selected laboratory experiments on the nature of viruses and mechanisms of viral replication, as well as other consequences of viral infections.

MED 654 RESEARCH PLANNING
5 credits. Identical with MCY 654. Prerequisite: 20 credits in progressive study of microbiology. An outline of the processes involved in scientific research, including initiating a problem, experimental techniques, analysis and evaluation of data, and reporting, illustrated by bacteriological examples.
MED 655 EXPERIMENTAL MICROBIOLOGY
2 to 5 credits. Identical with MCY 655. Prerequisites: 12 credits in microbiology and consent of instructor. Application of physical, chemical and biological techniques to experimental problems in microbiology. Individual laboratory study under supervision. May be repeated with change of content up to a maximum of 8 credits.
MED 656 THE LITERATURE OF MICROBIOLOGY
3 credits. Identical with MCY 656. Prerequisites: 12 credits of microbiology and consent of instructor. Bibliographic method in searching the literature of specified areas of the discipline.
MED 657 MICROBIAL METABOLISM
5 credits. Identical with MCY 657. Prerequisite: BCH 603. The intermediary metabolism of microorganisms; emphasizes those metabolic pathways that are unique or characteristic primarily of microorganisms.
MED 658 MICROBIAL PHYSIOLOGY
5 credits. Identical with MCY 658. Prerequisite: MED 657 or consent of instructor. The structural and functional elements of microorganisms and the mechanics of their regulatory system. Mechanisms of control of microbial DNA replication, cell division, ribosome and cell-wall formation; kinetic studies of normal and abnormal growth.
MED 659 PRINCIPLES OF IMMUNOLOGY
5 credits. Identical with MCY 659. Consent of staff required for registration. Biological and biochemical aspects of host resistance and immunity, with special emphasis on the chemical and physicochemical properties of the proteins of immune reactions.
MED 660 IMMUNOLOGY LABORATORY
3 credits. Identical with MCY 660. Corequisite: MED 659. Consent of staff is required for registration.
MED 661 BIOLOGY OF UNCOMMON MICROORGANISMS
5 credits. Identical with MCY 661. Prerequisites: MCY 302 and consent of instructor. Natural distribution, metabolic activities, isolation and culture of selected groups of microorganisms.
MED 662 MICROBIAL GENETICS
5 credits. Identical with MCY 662. Prerequisites: MCY 520, MCY 521, general genetics. Microbial genetics, including mutation, selection, transformation, transduction, conjugation and episomal factors, molecular structure and function of genes.
MED 663 PARASITIC DISEASES OF THE TROPICS AND SUBTROPICS
5 credits. Identical with MCY 663, ZY 663, and VY 663. A course in animal parasitology covering the mechanisms of parasitic infections, the physiology of parasites and the immune responses of the host; public health, veterinary and general aspects of various parasites affecting man and animals. Laboratory work includes experiments showing the effects of nutrition on parasites; immune responses, factors and modes of transmission; life cycles; morphology.
MED 664 VIRAL DISEASES
3 credits. Identical with MCY 664. Prerequisite: MED (MCY) 652. Pathogenesis of viral disease including cytopathic and oncogenic viruses. Diagnostic and preventive measures.
MED 665 MICROBIAL INFECTIONS
5 credits. The pathogenesis of selected bacterial and fungal diseases emphasizing the clinical and pathological aspects of human infection.
MED 666 MICROBIOLOGY 1
6 credits. Identical with MCY 666. Intensive review of principles of immunity, physiology and genetics of bacteria, virology, infection, and ecology (see also MED 667).
MED 667 MICROBIOLOGY 2
3 credits. Identical with MCY 667. Continuation of MED 666.
MED 668 REGULATION IN BIOLOGICAL SYSTEMS
5 credits. Identical with MCY 668. Prerequisites: MCY 520, 521; MED 657; BCH 601, 602. Control of enzyme activity: kinetic control (allosteric and non-allosteric), control at the energy level, permeases. Control of enzyme

synthesis: positive and negative; repression, induction, catabolic repression, cyclic AMP. Regulation in higher organisms; hormonal control.

MED 669 SEMINAR

1 credit. Identical with MCY 669. Attendance is required of all graduate majors at one research presentation and one graduate report each week as scheduled. May be repeated with change of content. Graded S/U.

MED 750 JOURNAL COLLOQUY

1 credit. Identical with MCY 750. Critical presentations and discussion of recent original articles in the microbiological literature. May be repeated with change of content. Graded S/U.

MED 751 RESEARCH CONFERENCE

1 credit. Identical with MCY 751. Critical discussion and appraisal of research programs of the faculty and students of the department. May be repeated with change of content. Graded S/U.

MED 752 CLINICAL IMMUNOLOGY

2 credits. Principles of basic immunology and immune reactions important in human disease such as immediate and delayed hypersensitivity, immune complexes, the Arthus phenomenon, and graft rejection.

NEUROSCIENCE

The Department offers programs leading to the M.S. and Ph.D. degrees in medical sciences with specialization in the basic neural and neurobehavioral sciences. While there are no fixed entrance prerequisites, prospective students should obtain a reasonable undergraduate background in biochemistry, physiology, statistics, and behavioral science. Students admitted with deficiencies in these areas will be required to obtain remedial training. All students will receive core training in neuroanatomy, neurophysiology, neurobehavioral science, neurochemistry, neuroendocrinology, neurohistology, and neuropharmacology. The remainder of the program will consist of laboratory research and advanced courses and seminars from this and other departments.

MED 600 HISTORY OF THE NEUROSCIENCES

3 credits. Prerequisite: Consent of instructor. History of the discoveries, concepts, and technical advances in the nervous system disciplines from ancient to modern times. The emergence of the several neurosciences as experimental disciplines that provide a foundation for rational medical applications.

MED 601 PAIN AND SOMESTHESIS

4 credits. Current research on central nervous system coding and information transfer, using somesthesis as a model with particular emphasis on pain.

MED 603 COMPARATIVE NEUROANATOMY AND NEUROPHYSIOLOGY

4 credits. Prerequisite: MED 741 or equivalent. The phylogenetic development of the central nervous system of vertebrate animals considered from the behavioral, anatomical, and electro-physiological points of view.

MED 622 PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

3 credits. Special and current problems in brain and spinal cord function covered in seminars.

MED 623 NEUROPHYSIOLOGY

3 credits. Physiology of nerve and muscle, central nervous system, and the special senses.

MED 633 NEUROBIOLOGY

5 credits. Prerequisite: Background in biological or behavioral sciences. Structure and physiology of the nervous system as it pertains to control of behavior.

MED 635 NEUROENDOCRINOLOGY

4 to 6 credits. Prerequisite: Permission of instructor. Neural regulations of endocrine systems in vertebrate animals. Correlative study of neuroanatomical, neurophysiological and neurochemical aspects of endocrine control.

MED 676 NEUROHISTOLOGY
4 credits. Prerequisites: MED 741 and consent of instructor. Histological approaches and techniques for the study of the neuronal, neuroglial, and mesenchymal cellular components of the central and peripheral nervous system.

MED 677 NERVE AS A TISSUE
2 credits. Prerequisite: Permission of instructor. Seminar on current research problems in the area of cellular interactions in the nervous system. Readings and discussion from articles in the fields contributing to the physiology, chemistry and anatomy of the nervous system.

MED 711 NEURAL-BEHAVIORAL-ENDOCRINE INTERACTIONS
4 credits. Prerequisite: Consent of instructor. Interrelationships of endocrine hormones, nervous system activity, and behavior. Sample topics include the role of hormones in sexual behavior, aggression, stress, parental behavior, learning and memory, mood, and target organ physiology.

MED 712 NEUROBEHAVIORAL RELATIONS
4 credits. Identical to PSY 775. Prerequisite: MED 741 or consent of instructor. Theories and data on the central nervous system basis for higher order function. Emphasis will be on arousal, purposeful behavior, and learning.

MED 713 INFORMATION STORAGE: A NEUROBIOLOGICAL APPROACH
4 credits. Identical with PSY 776. Prerequisite: MED 741 or consent of instructor. Consideration of data dealing with basic issues concerning the nature and behavioral plasticity and information storage and their central nervous system foundations. Particular emphasis will be paid to memory disruption and facilitation as an experimental tool in the study of memory processes.

MED 715 NEURAL MECHANISMS OF INGESTION AND ENERGY REGULATION
2 to 4 credits. Identical with PSY 770. Neuroanatomical, neurobehavioral, and neuroendocrinological mechanisms involved in the regulation of food and water consumption and regulation of body weight.

MED 716 COLLOQUIUM IN NEUROBIOLOGY
1 to 2 credits. Prerequisite: Consent of instructor. Current theoretical issues that relate to the neurophysiological, physiological, chemical and behavioral approaches to the study of the nervous system. May be repeated with change of content up to a maximum of 16 credits.

MED 717 PHYSIOLOGICAL BASIS OF BRAIN RHYTHMS
3 credits. Prerequisite: Consent of instructor. An analysis of the structural, physiological and pharmacological substrates for electrical activity of the central nervous system as manifested in the normal electroencephalogram including the development and relationship to evoked potentials.

MED 718 NEUROSCIENCE SEMINAR
1 to 2 credits. Prerequisite: Permission of instructor. Reading and discussion of current topics in neuroscience. May be repeated with change of content up to a maximum of 16 credits.

MED 719 SPECIAL TOPICS IN NEUROSCIENCE
1 to 6 credits. Prerequisite: Permission of instructor. Intensive reading and lectures in specialized fields of neuroscience and allied disciplines. May be repeated with change of content up to a maximum of 16 credits.

MED 720 RESEARCH METHODS IN NEUROSCIENCE
1 to 10 credits. Prerequisite: Permission of instructor. Research techniques in neurohistory, neurophysiology, neuroendocrinology, neurochemistry, neuropharmacology, neurobehavioral science, experimental neurology, neuroscience instrumentation, or electron microscopy under supervision of a staff member. May be repeated with change of content up to a maximum of 16 credits.

MED 741 MEDICAL NEUROSCIENCE
6 credits. Prerequisite: Consent of instructor. A comprehensive overview of human neuroanatomy from the subcellular to the gross tissue level. Lectures will also cover neurochemistry, neuropharmacology, neurophysiology, neuroendocrinology and neurobehavioral biology. Clinical correlations and applications will be given.

MED 742 RECENT ADVANCES IN NEUROSCIENCE
1 to 2 credits. Prerequisite: Consent of instructor. Seminar and group discussions of recent advances in one or more areas of neuroscience. These areas include neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroendocrinology and neurobehavioral biology. May be repeated up to a maximum of 16 credits.

MED 743 MOLECULAR NEUROBIOLOGY
4 credits. Prerequisites: Biochemistry and consent of instructor. A detailed discussion of the synthesis, metabolism, regulation, regional localization, subcellular localization, storage, release, molecular action, receptor chemistry and pharmacological manipulation of all putative CNS neurotransmitters and neuromodulators. Discussions will also cover the actions of these agents on intracellular metabolism, energy regulation and electrical activity.

MED 744 MOTOR SYSTEMS
4 credits. Prerequisite: Consent of instructor. A study of the basic mechanisms involved in motor activity including a detailed analysis of the nuscle spindle system and its central control by spinal cord and supraspinal mechanisms. Emphasis is on normal rather than abnormal processes.

MED 745 FUNCTIONAL NEUROCHEMISTRY
4 credits. Prerequisite: Biochemistry. A survey of molecules that play a special role in nervous system function or respond to neural stimulation. Included will be studies of nucleic acids, proteins, glycoproteins, glycolipids, nucleotides and neurotransmitters and the enzymes associated with their metabolism. Results from simple systems will be related to those of higher brain function.

PATHOLOGY

The Department offers programs leading to the M.S. and Ph.D. degrees in the medical sciences with specialization in experimental pathology. A separate track leading to advanced degrees in anatomical sciences is also offered.

Specific areas of specialization in experimental pathology include immunobiology, tumor biology, molecular biology, immunopathology, infectious diseases, immunohematology, clinical chemistry, electron microscopy, virology, comparative pathology, nutritional pathology, clinical pathology, renal pathology, and neuropathology. Areas of research and training in anatomical sciences include cell and membrane biology, cytochemistry and histochemistry, reproductive biology, dental histology, general embryology and developmental biology as well as gross, microscopic, and ultrastructural anatomy.

New graduate students in anatomical sciences and experimental pathology programs should have adequate undergraduate training in general chemistry, organic chemistry, general physics, general biology, and two or more advanced courses in the areas of physiological, developmental, or cellular biology, or in the case of students in clinical chemistry, courses in analytical, inorganic, and physical chemistry. Students may find it necessary to remedy deficiencies in their background by taking some undergraduate courses after admission to Graduate School. Courses in the major program will be determined by the student's advisory committee. The minor may be taken in any appropriate area.

MED 604 ADVANCES IN SUBMICROSCOPIC ANATOMY
4 credits. Prerequisites: Histology or cytology; approval of the staff. Ultrastructure in cells and tissues of vertebrate forms. Currant research trends and functional connotations where pertinant.

MED 605 RESEARCH METHODS IN ANATOMY
1 to 6 credits. Research techniques of histochemistry, radiation biology, experimental embryology, teratology, endocrinology, or electron microscopy under supervision of a staff member. May be repeated with change of content up to a maximum of 12 credits.

MED 606 ANATOMY SEMINAR
1 to 3 credits. Research reports and discussions of current research literature by departmental staff and graduate students. May be repeated with change of content up to a maximum of 12 hours.

MED 608 SPECIAL TOPICS IN ANATOMY
1 to 6 credits. Readings in the recent literature of anatomy and allied disciplines. May be repeated with change of content up to a maximum of 15 credits.

MED 609 EMBRYOLOGY AND ORGANOGENESIS
4 credits. Prerequisite: ZY 309 or MED 501. Human and higher mammalian development, with emphasis on maldevelopment. Physiological and clinical considerations stressed where pertinent.

MED 610 MECHANISMS OF DISEASE
5 credits. General principles of pathology and the mechanisms responsible for disease processes. May be taken by advanced undergraduates with consent of staff.

MED 611 SYSTEMIC PATHOLOGY
6 credits. Prerequisites: MED 610 and consent of staff. Pathological processes affecting each organ or organ system.

MED 632 TECHNIQUES IN ELECTRON MICROSCOPY
3 to 5 credits; Prerequisites: Histology and cytology. Proficiency acquired in techniques of specimen preparation and analysis for ultrastructure investigation and in use of the ultramicrotome, high vacuum evaporator, and electron microscope.

MED 640 CLINICAL CHEMISTRY AND TOXICOLOGY
3 credits. Chemical techniques undertaken for the diagnosis of disease. Methods of toxicology.

MED 641 SPECIAL CYTOLOGY
5 credits. Types of cells such as nerve, secretory, bone, muscle, connective tissue, blood, and lymphoid.

MED 643 CLINICAL CHEMISTRY AND TOXICOLOGY ROTATION I
10 credits. Participation in all phases of practical clinical chemistry and toxicology. Chemical methodology, clinical interpretation, and significance of laboratory measurements for the diagnosis of the sick. Individual investigative project in clinical chemistry and toxicology. Students specializing in clinical chemistry must spend three terms on this rotation.

MED 644 CLINICAL CHEMISTRY AND TOXICOLOGY ROTATION II
10 credits. Prerequisite: MED 643. Continuation of MED 643.

MED 645 CLINICAL CHEMISTRY AND TOXICOLOGY ROTATION III
10 credits.Prerequisite: MED 644. Continuation of MED 644.

MED 646 SPECIAL TOPICS IN PATHOLOGY
1 to 6 credits. Prerequisite: Permission of department. Supervised conferences and laboratory work. Topics selected to meet each student's needs. May be repeated with change of content up to a maximum of 18 credits.

MED 647 SEMINAR IN PATHOLOGY
1 credit. Required of graduate students in pathology; open to others by permission of the department. Current research literature and research reports by graduate students, department staff, and invited speakers.

MED 648 COMPARATIVE PATHOLOGY
4 credits. Prerequisites: MED 561, MED 511. The diseases of various organ systems of domestic and laboratory animals compared and contrasted with spontaneous diseases of man.

MED 649 NUTRITIONAL AND BIOCHEMICAL PATHOLOGY
4 credits. Prerequisites: MED 561, MED 511. The relationships between biochemical alterations and microscopic lesions in spontaneous and experimentally induced diseases having a defined nutritional or biochemical etiology.

MED 678 ADVANCED MICROSCOPIC ANATOMY
4 to 6 credits. Prerequisites: MED 503 or ZY 521; consent of instructor. Histological approaches and techniques relevant to selected research areas. Lectures, microscopic study, and laboratory project relating structural and functional aspects of a problem.

MED 679 ADVANCED GROSS ANATOMY
3 to 6 credits. Prerequisite: Permission of instructor. Regional and specialized anatomy of the human body taught by laboratory dissection, conferences, and demonstrations. May be repeated with change of content up to a maximum of 9 credits.

MED 690 TUMOR BIOLOGY
4 credits. Pathobiology, biochemistry, and molecular biology of neoplasia; viral and chamical carcinogenesis; immunology and therapy of cancer in man and animals.

MED 691 IMMUNOPATHOLOGY
3 credits. Abnormalities and diseases with immunological basis or component. Clinical and experimental specimens for analysis by modern immunological techniques.

MED 692 EXPERIMENTAL TUMOR BIOLOGY
3 credits. Prerequisite: MED 690 or consent of staff. The development of laboratory skills and fundamental techniques in the study of various phenomena in tumor biology. Students will work in direct association with members of the MED 690 staff.

MED 693 IMMUNOBIOLOGY
5 credits. Biological aspects of the defense systems, specific and nonspecific, cellular and humoral, amplification systems involving immune interactions; normal and abnormal conditions and sequellae, pathologic aspects of immunologic phenomena; phylogenetic and developmental aspects of immunity.

MED 694 IMMUNOBIOLOGY LABORATORY
3 credits. Prerequisite: Consent of staff. Corequisite: MED 693. Project oriented. Laboratory skills and techniques in immunobiology. Each student or small group of students will work in close association with a faculty member.

MED 760 MEMBRANE BIOLOGY
3 credits. The structure, composition and turnover of plasma and intracellular membranes will be examined. Topics relating to membrane function will also be considered including pinocytosis, regulation of intracellular exchange, cell recognition, cell communication, and virus formation.

PHARMACOLOGY & THERAPEUTICS

Students entering the course of study for the degree of Ph.D. in medical sciences with a major in pharmacology & therapeutics should present undergraduate course credits in chemistry, including quantitative analytical, organic and physical chemistry; elementary physics and biology, and mathematics through the calculus. Otherwise well-qualified students with certain deficiencies in preparation may be allowed to make these up during the first year of graduate study. In addition to elementary and advanced study in pharmacology, candidates will pursue courses in biochemistry, physiology, and other medical sciences as determined by consultation with their advisory committees.

MED 670 INTRODUCTION TO PHARMACOLOGY
5 credits. Prerequisites: Elementary courses in biochemistry and physiology. An overview of the entire field of pharmacology as the study of the interactions between living systems and foreign chemicals. Intended to prepare major for advanced courses or to familiarize non-majors with the area.

MED 671 THEORETICAL PHARMACOLOGY
5 credits. Prerequisite: CY 342. Physical, physiochemical, and mathematical aspects of pharmacology, including the theory of drug-receptor complexes, transport and distribution kinetics, and the kinetics of enyzme inhibition by drugs.

MED 672 CHEMICAL PHARMACOLOGY
5 credits. Chemical aspects of several special areas of modern pharmacology, such as metabolism of foreign compounds, structure-activity relationships, and the biochemistry of drug activity.

MED 673 PHYSIOLOGICAL PHARMACOLOGY
5 credits. Prerequisite: MED 670. Influence of drugs upon physiological systems. Cholinergic and Adrenergic mechanisms in autonomic pharmacology, renal and endocrine pharmacology, control of lund vasculature and smooth muscle in respiratory pharmacology.

MED 674 SEMINAR IN PHARMACOLOGY
1 credit. Research reports and discussions of current literature by graduate students, faculty, and invited speakers.
MED 701 RESEARCH METHODS IN PHARMACOLOGY I
1 credit. Readings, discussions, and practical experience with modern research methods, both instrumental and biological, used in pharmacology.
MED 702 RESEARCH METHODS IN PHARMACOLOGY II
1 credit. Continuation of MED 701.
MED 703 TOPICS IN PHARMACOLOGY
0 to 4 credits. Seminars, informal conferences, and/or laboratory work in the use of drugs in biochemical and physiological investigations. May be repeated with change of content up to a maximum of 12 credits.
MED 704 PHYSIOLOGY AND PHARMACOLOGY OF EXCITABLE MEMBRANES
3 credits. Prerequisite: Consent of instructors. Membrane ionic permeability changes underlying action and synaptic potential generation. Application of electrophysiological and radioactive tracer techniques to the analysis of drug action on excitable membranes. Offered jointly by the Departments of Pharmacology and Therapeutics and Physiology.

PHYSIOLOGY

The Department offers programs leading to the M.S. and Ph.D. degrees in the medical sciences with specialization in physiology. Prerequisites: Undergraduate majors that are appropriate foundations for the study of physiology are: biology, chemistry, engineering, mathematics, or physics. The following courses are especially useful as background for the study of physiology: general biology, vertebrate biology, general chemistry, analytical chemistry, organic chemistry, physical chemistry, teneral physics, calculus, and statistics. Students usually find it necessary to remedy deficiencies in their backgrounds by taking a few undergraduate courses after admission to Graduate School.

Course requirements: Most students will be advised to take the following, unless equivalent courses have been taken elsewhere: MED 503, 520, 521, 741, BCH 601, 602, 603, and 605. Additional courses will be elected from those listed below and from those offered by other departments. A minor field of study is not required but may be elected in another department of the College of Medicine such as Neuroscience or Immunology and Medical Microbiology, or elsewhere in the University in such Departments as Biochemistry, Physics, Psychology, or Zoology.

Dissertation: Research for the dissertation may be carried out in any of a number of areas of physiology including neurophysiology, endocrinology, respiration, circulation, physiology of muscle, environmental physiology, comparative physiology, and neonatal physiology.

MED 619 PHYSIOLOGY OF RESPIRATION
3 credits. Gas exchange in lungs and tissues. Ventilatory mechanics. Respiratory functions of bodily fluids. Physiological regulations. Comparative physiology of respiratory mechanisms.
MED 620 PHYSIOLOGY OF THE CIRCULATION OF BLOOD
3 credits. Physiology of the component parts of the circulation, relation of structures and function, emphasis on control mechanisms.

MED 621 RENAL PHYSIOLOGY
3 credits. Comparative physiological aspects of rental structura and function are covered in seminars.
MED 625 BODY TEMPERATURE REGULATION
3 credits. Neural and endocrine aspects of temperature regulation, hypo- and hyperthermia, adaptation to cold and heat, and hibernation will be covered. Comparative physiology of temperature regulation will be stressed.
MED 626 RECENT ADVANCES IN PHYSIOLOGY
3 credits. Content varies from year to year but covers recent advances in physiology. May be repeated with change of content up to a maximum of 15 credits.
MED 627 RESEARCH METHODS IN PHYSIOLOGY
2 to 6 credits. Maximum 9 credits. The special needs of each student will be met by conferences and laboratory work.
MED 628 SEMINAR IN PHYSIOLOGY
1 credit.
MED 629 NEONATAL PHYSIOLOGY
3 credits. Physiological regulations in newborn mammals.
MED 636 A SURVEY OF SENSORY SYSTEMS
4 credits. Identical with PSY 623. Prerequisite: MED 623 or PSY 600. Theories and data on human sensory reception and encoding. Audition, vision, and chemical and cutaneous senses.
MED 637 SEMINAR ON VISION
4 credits. Identical with PSY 629. Prerequisite: MED 623 or PSY 600. Selected current research and theory in visual function.
MED 638 PHYSIOLOGY OF THE MAMMALIAN THYROID GLAND
3 credits. Production, secretion, control and function of the thyroid hormones will be covered; interaction with other hormones will be stressed.
MED 704 PHYSIOLOGY AND PHARMACOLOGY OF EXCITABLE MEMBRANES
3 credits. Prerequisite: Consent of instructors. Membrane ionic permeability changes underlying action and synaptic potential generation. Application of electrophysiological and radioactive tracer techniques to the analysis of drug action on excitable membranes. Offered jointly by the Departments of Pharmacology and Therapeutics and Physiology.

UNDERGRADUATE COURSES IN THE MEDICAL SCIENCES

These courses are offered by the College of Medicine for students majoring in other colleges.

MED 300 LABORATORY TOPICS IN PSYCHOPHYSICS
2 credits. Identical with PSY 379. Prerequisite: PSY 201 or consent of instructor. A practicum in experimental methodology. Students will collect, analyze, and evaluate data on specific problems related to brain mechanisms of skin sensation.

MED 331 BASIC ANATOMY AND PHYSIOLOGY
3 to 5 credits. Identical with HRP 331. Prerequisite: ZY 201. Open to students in the College of Nursing and Health Related Professions and to others by permission of instructor. The structure and physiological function of selected human systems.

Enrollment restricted for the following courses to students accepted into the Basic Biological and Medical Sciences Program:

MED 436 CELL BIOLOGY SEMINAR
7 credits. Cellular functions in health and disease. The structure and molecular biology of the mammalian cell are stressed including such things as virus-cell interactions, inborn errors of metabolism, and bacterial growth. Identical to BCH 436.

MED 437 INTRODUCTION TO MEDICAL SCIENCES SEMINAR
4 credits. Patient care presentations dealing primarily with problems relating to metabolic diseases in man followed by in depth discussions of the basic phenomena designed to help students understand the pathophysiology of the diseases.

MED 438 INTRODUCTION TO MEDICAL SCIENCES SEMINAR
4 credits. Continuation of MED 437.

DIDACTIC SESSIONS

FACULTY

(Effective as of March 1, 1974)

ANESTHESIOLOGY

ANDERSEN, THORKILD W., M.D., (Copenhagen)
Professor

CALDERWOOD, HUGH W., V.M.D., (Univ. of Penn.)
Instructor and Instructor in Comparative Medicine

DE PADUA, CONSTANTE B., M.D., (U. of Phil.)
Assistant Professor

GIBBS, CHARLES P., M.D., (Indiana Univ.)
Assistant Professor and
Assistant Professor in Obstetrics and Gynecology

GRAVES, SHIRLEY A., M.D., (Univ. of Miami)
Assistant Professor and
Assistant Professor in Pediatrics

KIRBY, ROBERT R., M.D., (Univ. of Cal., S.F.)
Assistant Professor and
Assistant Professor in Surgery

KLEIN, E.F., JR., M.D., (Univ. of Missouri)
Assistant Professor and
Assistant Professor in Surgery

LEE, PETER K., M.D., Ch.B., (Moukden Med. Col.)
Visiting Research Professor

MODELL, JEROME H., M.D., (Univ. of Minnesota)
Professor and Chairman

MUNSON, EDWIN S., M.D., (Univ. of Tennessee)
Professor

PERKINS, HAVEN M., M.D., (Univ. of Louisville)
Professor

RAVIN, MARK B., M.D., (New York University)
Associate Professor

SAGA, SEGUNDINA A., M.D., (Univ. of Philippines)
Assistant Professor

* SHAH, DINESH O., Ph.D., (Columbia University)
Associate Professor and
Associate Professor in Chemical Engineering

THAM, MIN K., Ph.D., (University of Florida)
Assistant and Assistant in Chemical Engineering

Volunteer Faculty

ADEEB, ALLAN J., M.D., (Univ. of Tennessee)
Clinical Instructor/JHEP/Jacksonville

CHAPMAN, ROY L., JR., M.D. (Univ. of Tennessee)
Clinical Assistant Professor/Mississippi

DOWNS, JOHN B., M.D., (University of Florida)
Clinical Assistant Professor/Texas

DRURY, WILEY L., M.D., (Med. Col. of Georgia)
Clinical Instructor/Georgia

KRUSE, JOHN C., M.D., (George Wash. Univ.)
Clinical Assistant Professor/JHEP/Jacksonville

NUTT, RICHARD L., JR., M.D., (Med. Col. of Georgia)
Clinical Instructor/JHEP/Jacksonville

PHILLIPS, DARWIN D., M.D., (Univ. of Tenn.)
Clinical Instructor/JHEP/Jacksonville

RACKSTEIN, ANDREW D., M.D., (Chicago Med. Sch.)
Clinical Assistant Professor/Clearwater

RICHARDS, CHARLES C., M.D., (Johns Hopkins)
Clinical Assistant Professor/St. Petersburg

RILEY, JOSEPH L., M.D., (Loma Linda University)
Clinical Instructor/Orlando

SANCHEZ-SALAZAR, ANIBAL, M.D., (San Marcos)
Clinical Assistant Professor/JHEP/Jacksonville

SKORA, IRENA A., M.D., (Jagiellonski University)
Clinical Assistant Professor/JHEP/Jacksonville

STAGE, JOHN T., M.D., (Ohio State University)
Clinical Assistant Professor/JHEP/Jacksonville

TETLOW, ALAN G., M.D., (Univ. of Manchester)
Clinical Assistant Professor/Gainesville

TUAZON, JAIME G., M.D., (Univ. of Santo Tomas)
Clinical Assistant Professor/Orlando

YOST, WILLIAM F., M.D., (Univ. of Tennessee)
Clinical Assistant Professor/JHEP/Jacksonville

BIOCHEMISTRY

* ALLEN, CHARLES M., JR., Ph.D., (Brandeis University)
Associate Professor

* BOYCE, RICHARD P., Ph.D., (Yale University)
Professor

* CERUTTI, PETER A., M.D., Ph.D., (Univ. of Zurich)
Professor and Chairman

* CHUN, PAUL W., Ph.D., (University of Missouri)
Associate Professor

* COHEN, ROBERT JAY, Ph.D., (Yale University)
Assistant Professor

* FRIED, MELVIN, Ph.D., (Yale University)
Professor and Assistant Dean for Graduate
Medical Education

* GABBAY, EDMOND J., Ph.D., (Columbia Univ.)
Associate Professor and
Associate Professor in Chemistry

* GURIN, SAMUEL, Ph.D., (Columbia University)
Professor and Director, Whitney Marine Laboratory

HARIHARAN, P.V., Ph.D., (University of Toronto)
Instructor

* LARKIN, ANN R., Ph.D., (Univ. of Colorado)
Assistant Professor and Assistant Professor/VA

*Members of the Graduate Faculty

* LAIPIS, PHILIP J., Ph.D., (Stanford University)
Assistant Professor
* MANS, RUSTY J., Ph.D., (University of Florida)
Professor
* NOONAN, KENNETH D., Ph.D., (Princeton Univ.)
Assistant Professor
* O'BRIEN, THOMAS W., Ph.D., (Marquette Univ.)
Associate Professor and
Associate Professor in Biological Sciences

REMSEN, JOYCE, Ph.D., (Rutgers University)
Instructor
* ROBERTS, R. MICHAEL, Ph.D., (Oxford Univ.)
Associate Professor
* SANDER, EUGENE G., Ph.D., (Cornell University)
Associate Professor
* STEIN, GARY S., Ph.D., (Univ. of Vermont)
Assistant Professor
* TSIBRIS, JOHN, Ph.D., (Cornell University)
Assistant Professor and Assistant
Professor in Biological Sciences

COMMUNITY HEALTH AND FAMILY MEDICINE

* ARIET, MARIO, Ph.D., (University of Florida)
Associate Professor and Associate
Professor in Industrial Systems Engineering
* BANKS, SAMUEL A., JR., Ph.D., (Univ. of Chicago)
Associate Professor and
Associate Professor in Religion

BLAXALL, BRIAN J.W., M.D., (Univ. of Ottawa)
Instructor/JHEP and Acting Chairman

FANNIN, W. RAYMOND, JR., M.D., (Univ. of Florida)
Assistant Professor

GULLAT, VICTOR R., M.D., (Med. Col. of Georgia)
Clinical Assistant Professor

HANKINS, GARY C., M.D., (University of Florida)
Assistant Professor

HENRY, RICHARD A., M.D., (Johns Hopkins)
Associate Professor and
Associate Professor in Medicine

HILLING, HELEN C., Ph.D., (New York University)
Professor

HOWARD, D. ROBERT, M.D., (Univ. of Wisconsin)
Associate Professor and
Associate Professor in Medicine

LEWIS, DAVID E., M.A., (Duke University)
Assistant Professor

McLEAN, JAMES P., M.B.A., (Univ. of Florida)
Instructor and Associate Dean for Administration
* MASE, DARREL J., Ph.D., (Columbia University)
Professor and Dean Emeritus and
Professor of Health Related Professions

REYNOLDS, RICHARD C., M.D., (Johns Hopkins)
Professor and Chairman and
Professor in Medicine
* SLOAN, FRANK A., Ph.D., (Harvard Univ.)
Assistant Professor and
Assistant Professor in Economics

ST. PETERY, JULIA R., M.D., (Univ. of Florida)
Instructor
* VON MERING, O. OTTO, Ph.D., (Harvard Univ.)
Professor and Professor in
Anthropology and Urban Studies

Volunteer/Preceptor Faculty

Preceptors provide students an exposure
to private practice within the community.

ABEL, MARLING L., M.D., (Ohio State Univ.)
Preceptor/Cocoa Beach

ALFORD, SAMUEL J., M.D., (Loma Linda Univ.)
Preceptor/Jacksonville

ALSOP, FRED, W., M.D., (Howard University)
Preceptor/St. Petersburg

ALTEKRUSE, JOAN M., M.D., (Stanford Univ.)
Preceptor/Crestview

ANDREWS, FREDERICK C., M.D., (Tufts Univ.)
Preceptor/Mount Dora

ANDREWS, W.W., M.D., (Meharry Med. College)
Preceptor/Tampa

APPEN, RAYMOND C., M.D., (Duke University)
Preceptor/Cocoa

AUGUSTUS, CHARLES A., M.D., (Howard Univ.)
Preceptor/Pensacola

BARROW, GEORGE W., M.D., (Emory University)
Preceptor/Crestview

BARROW, MARK V., M.D., (University of Florida)
Preceptor/Gainesville

BASS, LEONARD, M.D., (Meharry Med. College)
Preceptor/Ft. Lauderdale

BERMAN, DONALD A., M.D., (Tulane University)
Preceptor/Hollywood

BOORAS, WILLIAM P., M.D., (University of Miami)
Clinical Instructor/JHEP/Jacksonville

BORK, DUANE L., M.D., (University of Iowa)
Clinical Instructor/JHEP/Jacksonville

BORLAND, JAMES L., M.D., (Johns Hopkins)
Preceptor/Jacksonville

BRASHEAR, BILLY, M.D., (Univ. of Louisville)
Preceptor/Gainesville

BRICKLER, ALEXANDER D., M.D., (Meharry)
Preceptor/Tallahassee

BURKE, CHARLES H., M.D., (Emory University)
Clinical Instructor/JHEP/Jacksonville

BUTLER, MICHAEL B., M.D., (Howard Univ.)
Preceptor/Tallahassee

CAMPBELL, ROY E., M.D., (Emory University)
Preceptor/Palatka

CARDUCCI, ALEXANDER T., M.D., (Wayne State)
Preceptor/Orlando

COLE, BEN M., M.D., (Medical Col. of S. C.)
Preceptor/Orlando

COLLETTE, JOHN W., M.D., (University of Miami)
Preceptor/Deland

COREA, CHARLES J., M.D., (Univ. of Tennessee)
Preceptor/Lynch, Kentucky

COX, J. MARK, M.D., (Loma Linda University)
Preceptor/Orlando

CULLINS, EARL T., M.D., (Meharry Med. Col.)
Preceptor/Jacksonville

DAILEY, JAMES O., M.D., (University of Miemi)
Preceptor/Williston

DESKY, MICHAEL, M.D., (University of Miami)
Preceptor/Hollywood

DE VITO, JAMES J., M.D., (Col. Phys. and Surgeons)
Preceptor/St. Augustine

DRAPER, ARTHUR D., M.D., (Emory University)
Clinical Instructor/JHEP/Jacksonville

ESTRADA, ROBERT, M.D., (University of Havana)
Preceptor/Tampa

EVANS, WILLIAM C.. M.D., (Duke University)
Preceptor/Gainesville

FAIN, NORMAN F., JR., M.D., (Med. Col. of Ala.)
Preceptor/Eau Gallie

FERRY, SENECA T., M.D., (Univ. of Missouri)
Preceptor/Lehigh Acres

GUYNN, CYRUS H., M.D., (Duke University)
Preceptor/Ft. Walton Beach

HANCOCK, W. ROY, M.D., (Med. Col. of Georgia)
Preceptor/Jacksonville

HANDWERKER, JOHN V., JR., M.D., (Univ. of Tenn.)
Preceptor/Key Biscayne

HARDGRAVE, NEWT L., M.D., (Univ. of Okla.)
Preceptor/Clearwater

HARRELL, H.L., M.D., (Vanderbilt University)
Preceptor/Ocala

HAUPT, RONALD A., M.D., (Loma Linda University)
Clinical Instructor/JHEP/Jacksonville

HAVRON, JAMES B., M.D., (Univ. of Tennessee)
Preceptor/South Pittsburg, Tennessee

HENDRIX, JOSEPH P., M.D., (Emory University)
Preceptor/Port St. Joe

HILLEBOE, HERMAN E., M.D., (Univ. of Minnesota)
Clinical Professor

HOFFMAN, CRAIG B., M.D., (Indiana Sch. of Med.)
Preceptor/Palmetto

KELLY, FRANK R., M.D., (Med. Col. of Virginia)
Preceptor/Richmond, Virginia

KIEHL, KENNETH C., M.D., (Univ. of Miami)
Preceptor/Sarasota

KIMMEL, BERNARD, M.D., (Univ. of Michigan)
Preceptor/West Palm Beach

KIRBY, TAYLOR H., M.D., (Emory University)
Preceptor/Gainesville

KNOTTS, BEN F., JR., M.D., (Univ. of Maryland)
Preceptor/Cocoa Beach

KRULL, DAVID J., M.D., (Indiana Sch. of Med.)
Preceptor/Palmetto

LEHRER, DAVID J., M.D., (Ohio State Univ.)
Preceptor/Clermont

LINDBERG, DALE K., M.D., (Ohio State Univ.)
Preceptor/Hollywood

LITTLE, GEORGE, M.D., (Univ. of Florida)
Preceptor/Gainesville

LONDONO, JAVIER H., M.D., (Emory University)
Preceptor/Gainesville

MacDONALD, IAN, M.D., (Tufts University)
Preceptor/Orlando

MARLOWE, JAMES M., M.D., (Univ. of Miami)
Preceptor/New Port Richey

McCOY, DONALD L., M.D., (Univ. of Kansas)
Preceptor/Williston

McGIBONY, JAMES T., M.D., (Emory University)
Clinical Associate Professor/JHEP/Jacksonville

McNAUGHTON, THOMAS M., M.D., (Indiana Univ.)
Preceptor/Lakeland

METZGER, CLYDE, M.D., (Univ. of Pennsylvania)
Preceptor/Steubenville, Ohio

MORGAN, MICHAEL G., M.D., (Univ. of Tennessee)
Preceptor/Lehigh Acres

MORRIS, WALTER E., M.D., (Univ. of Alabama)
Preceptor/Jacksonville

NIKOLAUS, DONALD, M.D., (Ohio State Univ.)
Preceptor/Dunedin

O'BRIEN, KEVIN, M.D., (Tulane University)
Preceptor/Riviera Beach

OLSEN, JULIAN O., M.D., (Tulane University)
Preceptor/Gulfbreeze

OPER, ARNOLD, M.D., (SUNY-Downstate)
Preceptor/Opa Locka

OTT, FRANKLIN B., M.D., (Loyola University)
Preceptor/Pompano Beach

PICHLER, FLOYD L., M.D., (Loma Linda Univ.)
Clinical Instructor/JHEP/Jacksonville

PORTELA, RAUL, M.D., (University of Havana)
Preceptor/Hialeah

PRINCE, JOHN T., M.D., (Ohio State Univ.)
Preceptor/Jupiter

QUEHL, THOMAS M., M.D., (Tulane University)
Preceptor/St. Petersburg

RAY, BELTON C., M.D., (Emory University)
Clinical Instructor/JHEP/Jacksonville

REIN, HARRY, M.D., (SUNY-Downstate)
Preceptor/Orlando

REMSEN, DOUGLAS B., M.D., (Johns Hopkins)
Clinical Assistant Professor/Gainesville

RICHMAN, WILLIAM, M.D., (Temple University)
Preceptor/Hollywood

RICHTER, KENNETH R., M.D., (Univ. of Tennessee)
Preceptor/Lynch, Kentucky

ROBINSON, NEAL A., M.D., (Univ. of Arkansas)
Preceptor/Eustis

SALTZMAN, EDWARD J., M.D., (Jefferson Univ.)
Preceptor/Hollywood

SANTI, KATHLEEN, M.D., (Emory University)
Preceptor/Palatka

SCHULZ, RICHARD N., M.D., (Emory University)
Preceptor/Marianna

SELANDER, GUY, M.D., (Seton Hall Col. of Med.)
Clinical Instructor/JHEP/Jacksonville

SHEPPARD, JAMES C., M.D., (Univ. of Alabama)
Preceptor/Ft. Walton Beach

SHINNER, JOHN J., M.D., (Univ. of Rochester)
Preceptor/St. Petersburg

SIMPSON, DAZELLE D., M.D., (Meharry Med. Col.)
Preceptor/Miami

SIMPSON, SHIRLEY R., M.D., (Univ. of Florida)
Preceptor/Port St. Joe

SKINNER, RICHARD G., M.D., (Emory Univ.)
Preceptor/Jacksonville

SMEDLEY, J.T., M.D., (Univ. of Tennessee)
Preceptor/Coconut Grove

SMITH, F.A., M.D., (Meharry Medical College)
Preceptor/Tampa

SNODGRASS, RICHARD W., M.D., (Univ. of Rochester)
Preceptor/Daytona Beach

SOURBEER, JOHN N., M.D., (Jefferson Univ.)
Preceptor/Largo

STEELE, HUGH G. M.D., (Tulane University)
Preceptor/Ft. Lauderdale

TALLEY, ROBERT G., M.D., (Univ. of Tennessee)
Preceptor/Ft. Lauderdale

THORNTON, FRANK J., M.D., (Emory University)
Preceptor/Haines City

TRUMP, RICHARD C., M.D., (Ohio State Univ.)
Preceptor/Madiera Beach

ULSETH, ROBERT N., M.D., (Univ. of Florida)
Preceptor/West Palm Beach

VON THRON, JOSEPH C., M.D., (Ohio State University)
Preceptor/Cocoa Beach

WACHTEL, LEO M., M.D., (Jefferson Medical College)
Clinical Instructor/JHEP/Jacksonville

WEAVER, THOMAS, M.D., (Medical College of Georgia)
Preceptor/Clermont

WIER, KENNETH N., M.D., (University of Tennessee)
Preceptor/Lynch, Kentucky

WHITE, ELGA B., M.D., (University of Miami)
Preceptor/Blountstown

WILLIAMS, JAY D., M.D., (Emory University)
Preceptor/Pensacola

WILLIAMS, WARREN L., M.D., (Univ. of Colorado)
Preceptor/Englewood, Colorado

ZIFFER, ALBERT M., M.D., (New York Univ.)
Preceptor/Altamonte Springs

IMMUNOLOGY AND MEDICAL MICROBIOLOGY

* BAER, HERMAN, M.D., (Univ. of Basle, Switzerland)
Associate Professor end
Director of Clinical Laboratories

* BLEIWEIS, ARNOLD S., Ph.D., (Penn. State)
Associate Professor and
Associate Professor in Microbiology

* CLEM, L. WILLIAM, Ph.D., (Univ. of Miami)
Professor and
Professor in Microbiology

* CRANDALL, RICHARD B., Ph.D., (Purdue Univ.)
Associate Professor

* CUSUMANO, CHARLES L., M.D., (Georgetown Univ.)
Assistant Professor and
Assistant Professor in Medicine

* DUCKWORTH, DONNA H., Ph.D., (Johns Hopkins)
Assistant Professor

* GASKIN, JACK M., Ph.D., (Cornell University)
Assistant Professor and
Assistant Professor in Veterinary Science

* GIFFORD, GEORGE E., Ph.D., (Univ. of Minnesota)
Professor and
Professor in Microbiology

* HOFFMANN, EDWARD M., Ph.D. (Univ. of Miami)
Associate Professor and
Associate Professor in Microbiology

* LEY, KENNETH D., Ph.D., (Washington State Univ.)
Assistant Professor and
Assisent Professor in Veterinary Science

POTTS, THOMAS, Ph.D., (Univ. of Rochester)
Assistant Professor and
Assistant Professor in Basic Dental Sciences

* SHANDS, JOSEPH W., JR., M.D., (Duke University)
Professor and
Professor in Medicine

* SMALL, PARKER A., JR., M.D., (Univ. of Cincinnati)
Professor and Chairman

MEDICINE

General Medicine and Community Programs

CARANASOS, GEORGE J., M.D., (Johns Hopkins)
Associate Professor and Director, General Clinic

CLUFF, LEIGHTON E., M.D., (George Washington Univ.)
Professor and Chairman.

LONGLEY, SELDON, M.D., (Vanderbilt)
Chief Resident and Instructor/VA

WYNNE, JAMES W., M.D., (Cornell Medical College)
Chief Resident and Instructor/STH

Volunteer Faculty

ANDERSON, RICHARD M., M.D., (Emory Univ.)
Clinical Instructor/Gainesville

BRASHEAR, BILLY, M.D., (Univ. of Louisville)
Clinical Instructor/Gainesville

CRAGO, JOHN A., M.D., (Cornell University)
Clinical Instructor/Gainesville

DAWKINS, WILBERT D., SR., M.D., (Meharry)
Clinical Instructor/JHEP/Jacksonville

DOFF, SIMON, M.D., (Long Island Col. of Med.)
Clinical Associate Professor/JHEP/Jacksonville

EBBINGHOUSE, JOE C., M.D., (Indiana Univ.)
Clinical Associate Professor/JHEP/Jacksonville

EMMEL, LEONARD G., M.D., (Univ. of Penn.)
Clinical Instructor/Gainesville

FERRARA, JOHN T., M.D., (Yale University)
Clinical Assistant Professor/JHEP/Jacksonville

MONSOUR, FARIS, M.D., (Georgetown University)
Clinical Associate Professor/JHEP/Jacksonville

STRACHAN, JAMES B., M.D., (Washington Univ.)
Clinical Professor/JHEP/Jacksonville

WEIGEL, WALTER W., M.D., (Emory Univ.)
Clinical Instructor/Palatka

Cardiology

CONTI, C. RICHARD, M.D., (Johns Hopkins)
Professor and Chief

CREVASSE, LAMAR E., JR., M.D., (Duke Univ.)
Professor and Assistant Dean for Continuing Medical Education

CURRY, R. CHARLES, M.D., (Univ. of Florida)
Assistant Professor

EL SHAHAWY, MAHFOUZ, M.D., (Vienna Med. Sch.)
Assistant Professor

GREEN, J. RUSSELL, JR., M.D., (Univ. of Va.)
Associate Professor

MILLER, ALAN B., M.D., (Univ. of Pittsburgh)
Assistant Professor/JHEP

TAYLOR, W. JAPE, M.D., (Harvard University)
Professor

WISE, DANIEL E., M.D., (Ohio State Univ.)
Assistant Professor

Volunteer Faculty

ADAMS, LESLIE R., M.D., (Univ. of Penn.)
Clinical Associate Professor/JHEP/Jacksonville

ALEMAN, JUAN F., M.D., (Univ. of Salamanca)
Clinical Instructor/JHEP/Jacksonville

ANDERSON, GEORGE A., M.D., (Bowman Gray)
Clinical Associate Professor/JHEP/Jacksonville

ANDREWS, JOHN W., M.D., (Emory Univ.)
Clinical Instructor/Gainesville

BAKER, ROY, M.D., (Emory University)
Clinical Associate Professor/JHEP/Jacksonville

BARROW, MARK V., M.D., (University of Florida)
Clinical Assistant Professor/Gainesville

BIRCH, LARRY, M.D., (University of Michigan)
Clinical Assistant Professor/JHEP/Jacksonville

BURNS, MARSHALL A., M.D., (Tulane Univ.)
Clinical Associate Professor/JHEP/Jacksonville

DACE, MELVIN C., M.D., (Washington Univ.)
Clinical Instructor/Gainesville

FARIS, WILLIAM E., M.D., (Tulane Univ.)
Clinical Associate Professor/JHEP/Jacksonville

GILMOUR, KAY E., M.D., (University of Florida)
Clinical Assistant Professor/JHEP/Jacksonville

GROOVER, MARSHALL E., M.D., (Univ. of Georgia)
Clinical Associate Professor/JHEP/Jacksonville

GUY, CLIFFORD R., M.D., (N.J. Col. of Med.)
Clinical Assistant Professor/JHEP/Jacksonville

HANSON, KARL B., M.D., (Univ. of Chicago)
Clinical Professor/JHEP/Jacksonville

IRA, GORDON, H., JR., M.D., (Duke University)
Clinical Associate Professor/JHEP/Jacksonville

JACOBS, DANIEL M., M.D., (Duke University)
Clinical Assistant Professor/JHEP/Jacksonville

McCULLAGH, JAMES M., M.D., (Emory Univ.)
Clinical Instructor/JHEP/Jacksonville

MONTGOMERY, JAMES A., M.D., (Tulane Univ.)
Clinical Instructor/JHEP/Jacksonville

OLLIFF, BENJAMIN J., M.D., (Med. Col. of Ga.)
Clinical Instructor/JHEP/Jacksonville

PAGE, E. EUGENE, JR., M.D., (Johns Hopkins)
Clinical Associate Professor/JHEP/Jacksonville

PEELER, ROBERT G., M.D., (Johns Hopkins)
Clinical Assistant Professor/JHEP/Jacksonville

SCHNEIDER, IRVIN, M.D., (Tulane University)
Clinical Associate Professor/JHEP/Jacksonville

SOLER, RAUL, M.D., (University of Havana)
Clinical Assistant Professor/JHEP/Jacksonville

DE LA TORRE, ANGEL, M.D., (Univ. of Havana)
Clinical Associate Professor/JHEP/Jacksonville

VAN CLEVE, ROBERT, M.D., (Columbia Univ.)
Clinical Associate Professor/JHEP/Jacksonville

YOFFEE, HARRY F., M.D., (Tulane University)
Clinical Assistant Professor/JHEP/Jacksonville

Comparative Medicine

HESSLER, JACK R., D.V.M., (Univ. of Miss.)
Assistant Professor

* MORELAND, ALVIN E., D.V.M., (Univ. of Georgia)
Professor and Director, Animal Department

OLSON, GERALD A., D.V.M., (Auburn University)
Assistant Professor

Dermatology

CULLEN, STANLEY I., M.D., (University of Miami)
Associate Professor

Volunteer Faculty

CHILDERS, RICHARD C., M.D., (Univ. of Rochester)
Clinical Assistant Professor/Coral Gables

SNYDER, CHARLES, M.D., (Indiana University)
Clinical Instructor/JHEP/Jacksonville

SOMPAYRAC, LAUREN M., M.D., (Univ. of Penn.)
Clinical Associate Professor/JHEP/Jacksonville

WILKERSON, RUTH, M.D., (Med. Col. of Va.)
Clinical Instructor/Gainesville

Endocrinology and Metabolism

* FISHER, WALDO R., M.D., (Univ. of Penn.)
Associate Professor

FREUND, GERHARD, M.D., (Goethe University)
Associate Professor/VA

ROQUE, JUAN J., M.D., (University of Seville)
Assistant Professor/JHEP

THOMAS, WILLIAM C., JR., M.D., (Cornell Univ.)
Professor, Associate Chief of Staff for Research/VA

Volunteer Faculty

BURKE, HERBERT A., JR., M.D., (Vanderbilt Univ.)
Clinical Professor/JHEP/Jacksonville

COBLE, YANK D., M.D., (Duke University)
Clinical Associate Professor/JHEP/Jacksonville

KNIZLEY, HOMER, M.D., (University of Florida)
Clinical Associate Professor/Gainesville

LONDONO, JAVIER H., M.D., (Emory Univ.)
Clinical Assistant Professor/Gainesville

LOWENTHAL, JOSEPH J., M.D., (Univ. of Penn.)
Clinical Professor/JHEP/Jacksonville

McCOLLOUGH, ROBERT H., M.D., (Univ. of Florida)
Clinical Instructor/Gainesville

MILLER, ROBERT, M.D., (University of Florida)
Clinical Assistant Professor/JHEP/Jacksonville

SCHWALBE, FRANK C., JR., M.D., (Emory Univ.)
Clinical Associate Professor/JHEP/Jacksonville

Gastroenterology

CERDA, JAMES., M.D., (Univ. of Maryland)
Associate Professor

* CORNELIUS, CHARLES F., D.V.M., Ph.D., (U. of Cal.)
Professor and Dean,
College of Veterinary Medicine

KOLTS, BYRON E., M.D., (Univ. of Rochester)
Assistant Professor

* McGUIGAN, JAMES E., M.D., (St. Louis University)
Professor and Chief

NELSON, EDWARD W., JR., M.D., (Tulane Univ.)
Instructor

TOSKES, PHILLIP P., M.D., (Univ. of Maryland)
Assistant Professor

Volunteer Faculty

BORLAND, JAMES, M.D., (Johns Hopkins)
Clinical Associate Professor/JHEP/Jacksonville

DONELAN, RICHARD T., M.D., (Tufts Univ.)
Clinical Assistant Professor/JHEP/Jacksonville

HANCOCK, ROY, M.D., (Med. Col. of Georgia)
Clinical Associate Professor/JHEP/Jacksonville

KRAMER, DEAN C., M.D., (Univ. of Missouri)
Clinical Assistant Professor/Gainesville

MORRIS, WALTER E., JR., M.D. (Med. Col. of Ala.)
Clinical Assistant Professor/JHEP/Jacksonville

Hematology - Oncology

ABRAMSON, NEIL, M.D., (Albert Einstein Col. of Med.)
Associate Professor/JHEP

KEENE, WILLIS R., M.D., (Johns Hopkins)
Professor and JHEP Chairman

KEITT, ALAN S., M.D., (Harvard University)
Associate Professor and Associate
Professor in Community Health and Family Medicine

*NEWCOMB, THOMAS F., M.D., (Univ. of Pittsburgh)
Professor

NOYES, WARD D., M.D., (Univ. of Rochester)
Professor and Chief

SCHIENEMAN, BRUCE O., M.D., (Ohio State Univ.)
Assistant Professor

STREIFF, RICHARD R., M.D., (Univ. of Basle)
Associate Professor and
Chief of Medical Services/VA

Volunteer Faculty

LIM, GREGORIO T., M.D., (U. of Philippines)
Clinical Instructor/JHEP/Jacksonville

MOOMAW, DAVID, M.D., (Northwestern Univ.)
Clinical Associate Professor/JHEP/Jacksonville

TROTTER, GEORGE S., M.D., (Univ. of Maryland)
Clinical Associate Professor/JHEP/Jacksonville

Infectious Diseases, Allergy, Rheumatology [Clinical Immunology]

CALDWELL, JACQUES R., M.D., (Johns Hopkins)
Assistant Professor

*DEAL, WILLIAM B., M.D., (Univ. of North Carolina)
Associate Professor, Associate Dean, and
Associate Professor in Department of Community
Health and Family Medicine

LEE, J. DOUGLAS, M.D., (Johns Hopkins)
Instructor

MICHAEL, MAX, JR., M.D., (Harvard Univ.)
Professor and Assistant Dean/JHEP

PANUSH, RICHARD S., M.D., (Univ. of Michigan)
Assistant Professor

STEIN, GERALD H., M.D., (Univ. of Penn.)
Assistant Professor and Assistant Professor in
Department of Community Health and
Family Medicine

VANDEVELDE, ALEXANDER G., M.D., (U. of Louvain)
Assistant Professor/JHEP

WALDMAN, ROBERT H., M.D., (Washington Univ.)
Associate Professor and Chief, and Associate
Professor in Immunology and Medical Microbiology

Volunteer Faculty

GARTEN, LEONARD, M.D., (Med. Col. of Georgia)
Clinical Assistant Professor/JHEP/Jacksonville

MAUCERI, ARTHUR A., M.D., (Georgetown Univ.)
Clinical Instructor/Gainesville

NEWMAN, MELVIN, M.D., (Boston University)
Clinical Assistant Professor/JHEP/Jacksonville

PRATHER, E. CHARLTON, M.D., (Bowman Gray)
Clinical Associate Professor/JHEP/Jacksonville

SALES, LOUIS M., M.D., (Boston University)
Clinical Associate Professor/JHEP/Jacksonville

STORCH, SIDNEY, M.D., (Univ. of Brussels)
Clinical Associate Professor/JHEP/Jacksonville

Pulmonary Disease

*BLOCK, A., JAY, M.D., (Johns Hopkins)
Associate Professor and Chief

HARRIS, JAMES O., M.D., (Univ. of Mississippi)
Assistant Professor/VA

*SWENSON, EDWARD W., M.D., (Univ. of Nebraska)
Associate Professor

TUCKER, WILLIAM B., M.D., (Univ. of Chicago)
Professor/VA

*ZAUNER, CHRISTIAN W., Ph.D., (Southern Ill.)
Associate Professor and
Professor in Physical Education

Volunteer Faculty

ANDERSON, AUGUSTUS E., M.D., (Tulane Univ.)
Clinical Associate Professor/JHEP/Jacksonville

ARMSTRONG, ALLAN L., M.D., (Univ. of Virginia)
Clinical Instructor/Tampa

HENDERSON, FRANK W., M.D., (Jefferson)
Clinical Assistant Professor/Lake City

MORERA, JULIO E., M.D., (University of Sorbonne)
Clinical Instructor/Lake City

NEDER, GEORGE A., JR., M.D., (Emory Univ.)
Clinical Instructor/Orlando

Renal

CADE, J. ROBERT, M.D., (University of Texas)
Professor and Chief

FINLAYSON, GORDON C., M.D., Ph.D., (Univ. of Chicago)
Assistant Professor

JUNCOS, LUIS I., M.D., (Nat'l. Univ. of Cordoba)
Assistant Professor

PITTS, ROBERT F., M.D., (New York Univ.)
Research Professor

SCHLEIN, EDWARD, M.D., (Univ. of Florida)
Assistant Professor

Volunteer Faculty

GREGORY, LOUIS F., M.D., (Univ. of Miss.)
Clinical Assistant Professor/JHEP/Jacksonville

HAYES, CHARLES P., M.D., (Duke University)
Clinical Associate Professor/JHEP/Jacksonville

SPOONER, GEORGE R., III, M.D., (Univ. of Florida)
Clinical Assistant Professor/JHEP/Jacksonville

NEUROLOGY

GREER, MELVIN, M.D., (New York University)
Professor and Chairman

*HEILMAN, KENNETH M., M.D., (Univ. of Va.)
Associate Professor

VALENSTEIN, EDWARD, M.D., (Albert Einstein)
Assistant Professor

WATSON, ROBERT T., M.D., (Univ. of Florida)
Assistant Professor/VA

WILDER, B. JOE, M.D., (Duke University)
Professor/VA

Volunteer Faculty

ANDRIOLA, MARY R., M.D., (Duke Univ.)
Clinical Instructor/Largo

ANDRIOLA, MICHAEL J., M.D., (Duke Univ.)
Clinical Instructor/Largo

BERCAW, BEAUREGARD L., M.D., (Univ. of Va.)
Clincal Instructor/Clearwater

CUNNINGHAM, RICHARD W., M.D., (Univ. of Fla.)
Clincal Instructor/Gainesville

GIPSON, AMOS C., M.D., (Vanderbilt Univ.)
Clinical Instructor/Tampa

GREEN, JACOB, M.D., (Univ. of Alabama)
Clinical Associate Professor/JHEP/Jacksonville

HARRISON, THOMAS H., M.D., (Duke Univ.)
Clincal Instructor/Tampa

HAYCOOK, WILLIAM M., M.D., (Univ. of Va.)
Clinical Instructor/Jacksonville

HUDGINS, ROBERT, M.D., (Med. Col. of Virginia)
Clinical Assistant Professor/JHEP/Jacksonville

LOPEZ, RAUL I., M.D., (Univ. of Florida)
Clinical Instructor/Lakeland

LYNDE, ROBERT, M.D., (Med. Col. of Virginia)
Clinical Instructor/JHEP/Jacksonville

McCULLAGH, WILLIAM H., M.D., (Emory)
Clinical Associate Professor/JHEP/Jacksonville

POHLMAN, GLENN L., M.D., (Univ. of Minn.)
Clinical Instructor/JHEP/Jacksonville

QUICK, DONALD T., M.D., (Case Western Reserve)
Clinical Associate Professor/Gainesville

ROBINSON, BRYAN W., M.D., (Emory)
Clinical Instructor/Tallahassee

SCALES, DAVID F., M.D., (Univ. of Florida)
Clinical Instructor/JHEP/Jacksonville

NEUROSCIENCE

* BERNSTEIN, JERALD J., Ph.D., (Univ. of Michigan)
Associate Professor and
Associate Professor in Ophthalmology

* DUNN, ADRIAN J., Ph.D., (Univ. of Cambridge)
Assistant Professor

* ISAACSON, ROBERT L., Ph.D., (Univ. of Michigan)
Professor and Professor in Psychology

* KING, FREDERICK A., Ph.D., (Johns Hopkins)
Professor and Chairman, Professor in Psychology

* KING, ROBERT L., Ph.D., (Johns Hopkins)
Assistant Professor

* LUTTGE, WILLIAM G., Ph.D., (Univ. of Cal., Irvine)
Assistant Professor

* MAHAN, PARKER E., D.D.S., Ph.D.,
(Emory, University of Rochester)
Professor and Professor and Chairman,
Department of Basic Dental Sciences

* MUNSON, JOHN B., Ph.D., (Univ. of Rochester)
Associate Professor

* VAN HARTESVELDT, CAROL J., Ph.D., (Rochester)
Assistant Professor and
Assistant Professor in Psychology

* VIERCK, CHARLES J., JR., Ph.D., (Univ. of Florida)
Associate Professor and
Associate Professor in Psychology

* WALKER, DON W., Ph.D., (Texas Christian Univ.)
Assistant Professor and Research Psychologist/VA

* ZORNETZER, STEVEN F., Ph.D., (U. of Cal., Irvine)
Assistant Professor

OBSTETRICS AND GYNECOLOGY

* ABRAMS, ROBERT M., Ph.D., D.D.S., (Univ. of Penn.)
Assistant Professor

BARD, DAVID S., M.D., (Columbia University)
Assistant Professor

* BARRON, DONALD H., Ph.D., (Yale University)
Professor

BHATT, BARATI K., M.D.,
(B. J. Medical College and
Civil Hospital, Ahmedabad, India)
Instructor

BURGESS, PAUL, L. Th., M.S.P.H., (Univ. of N.C.)
Assistant Professor

* CATON, DONALD, M.D., (Columbia Univ.)
Assistant Professor and
Assistant Professor in Anesthesiology

CRISS, WAYNE, Ph.D., (Univ. of Florida)
Assistant Professor

CRUZ, AMELIA C., M.D., (Far Eastern Univ.)
Instructor

DALY, JAMES W., M.D., (Loyola University)
Associate Professor

HILL, HUGH M., M.D., (Johns Hopkins)
Professor and Associate Dean for Student
and Alumni Affairs

KALRA, S. P., Ph.D., (University of Delhi, India)
Assistant Professor

McKERNS, KENNETH W., Ph.D., (McGill Univ.)
Professor

MOJADIDI, QUDRATULLAH, M.D., (Kabul Univ.)
Assistant Professor/JHEP

MONIF, GILLES R. G., M.D., (Boston Univ.)
Associate Professor

NUSS, ROBERT C., M.D., (Thomas Jefferson)
Associate Professor/JHEP

SPELLACY, WILLIAM N., M.D., (Univ. of Minnesota)
Professor and Chairman

THOMPSON, ROBERT J., M.D., (Wayne State Univ.)
Associate Professor and JHEP Chairman

Volunteer Faculty

ALLEN, ROBERT H., M.D., (Univ. of Mississippi)
Clinical Instructor/Pensacola

ALLGOOD, JACKSON L., JR., M.D., (Med. Col. of Ga.)
Clinical Associate Professor/JHEP/Jacksonville

BANCROFT, JOE W., JR., M.D., (Univ. of Miami)
Clinical Assistant Professor/JHEP/Jacksonville

BAZLEY, WILLIAM S., M.D., (Univ. of Miami)
Clinical Instructor/JHEP/Jacksonville

BEADLING, LESLIE W., M.D., (Temple Univ.)
Clinical Associate Professor/JHEP/Jacksonville

BRADEN, FREDERICK R., M.D., (Tulane Univ.)
Clinical Assistant Professor/Pensacola

CARSON, DORIS N., M.D., (Ohio State Univ.)
Clinical Associate Professor/JHEP/Jacksonville

COLMER, WILLIAM M., JR., M.D., (Vanderbilt)
Clinical Associate Professor/Pensacola

COUCH, GORDON T., M.D., (Univ. of Florida)
Clinical Associate Professor/Pensacola

DENHAM, SAM WESLEY, M.D., (Emory Univ.)
Clinical Associate Professor/JHEP/Jacksonville

DOUGLAS, J. WILLIAM, M.D., (Tulane Univ.)
Clinical Professor/Pensacola

DUCKETT, HOWARD C., JR., M.D., (Duke Univ.)
Clinical Associate Professor/JHEP/Jacksonville

FRAZIER, EDDIE M., JR., M.D., (Med. Col. of Ga.)
Clinical Assistant Professor/Pensacola

GOSS, ALBERT S., JR., M.D., (Emory Univ.)
Clinical Associate Professor/JHEP/Jacksonville

HAGEL, DONALD R., M.D., (Univ. of Nebraska)
Clinical Associate Professor/JHEP/Jacksonville

HARRELL, JAMES E., M.D., (Univ. of Florida)
Clinical Associate Professor/Stuart

JONAS, A. GARLAND, JR., M.D., (Vanderbilt Univ.)
Clinical Associate Professor/JHEP/Jacksonville

LONG, FRANK G., M.D., (Temple University)
Clinical Associate Professor/JHEP/Jacksonville

MANTOOTH, MURRAY K., M.D., (Univ. of Tenn.)
Clinical Assistant Professor/JHEP/Jacksonville

McCAW, WILLIAM H., M.D., (Med. Col. of S.C.)
Clinical Professor/Pensacola

McCRANIE, PETER A., M.D., (Emory University)
Clinical Associate Professor/JHEP/Jacksonville

McCURDY, CHARLES M., M.D., (Univ. of Florida)
Clinical Associate Professor/St. Petersburg

McDOWELL, RICHARD W., M.D., (Univ. of Penn.)
Clinical Professor/JHEP/Jacksonville

McMAHON, DONALD, JR., M.D., (Tulane Univ.)
Clinical Assistant Professor/Pensacola

McNEIL, JAMES P., M.D., (Univ. of Virginia)
Clinical Associate Professor/JHEP/Jacksonville

McNEILL, H. WYATT, M.D., (Univ. of Miami)
Clinical Assistant Professor/JHEP/Jacksonville

MEIN, ROBERT M., M.D., (Univ. of Louisville)
Clinical Associate Professor/JHEP/Jacksonville

MENZIES, DONALD S., JR., M.D., (Univ. of N.C.)
Clinical Associate Professor/Gainesville

MESSER, H. HUTSON, M.D., (Univ. of Florida)
Clinical Associate Professor/Tallahassee

MORRISON, SIDNEY E., M.D., (Duke Univ.)
Clinical Associate Professor/Hollywood

MULLEE, ROBERT G., M.D., (SUNY-Upstate)
Clinical Associate Professor/Gainesville

MURPHY, EUGENE L., M.D.,
(Health Sciences Div. of Virginia Commonwealth)
Clinical Assistant Professor/Pensacola

OBERDORFER, PAUL W., M.D., (Tulane Univ.)
Clinical Assistant Professor/JHEP/Jacksonville

PAYNE, HENRY H., JR., (Tulane Univ.)
Clinical Assistant Professor/Pensacola

PERMENTER, WILLIAM D., M.D., (Univ. of Tenn.)
Clinical Assistant Professor/Pensacola

PHELAN, WILLIAM J., M.D., (Georgetown Univ.)
Clinical Associate Professor/JHEP/Jacksonville

PHILLIPS, CURTIS M., M.D., (Med. Col. of Ga.)
Clinical Associate Professor/JHEP/Jacksonville

PYLE, ROBERT C., M.D., (Univ. of Miami)
Clinical Assistant Professor/Pensacola

ROSIN, ALEXANDER P., M.D., (Tulane Univ.)
Clinical Assistant Professor/JHEP/Jacksonville

STALNAKER, BENJAMIN L., M.D., (Univ. of Florida)
Clinical Assistant Professor/Pensacola

SUTER, MAX, M.D., (Tulane Univ.)
Clinical Professor/JHEP/Jacksonville

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OPHTHALMOLOGY

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Professor and Professor in
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FITZGERALD, CONSTANCE K., M.D., (Wash. Univ.)
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GASSET, ANTONIO R., M.D., (Boston University)
Assistant Professor

* KAUFMAN, HERBERT E., M.D., (Harvard Med. Sch.)
Professor and Chairman and
Professor in Pharmacology

LEVY, NORMAN S., M.D., (Western Reserve)
Assistant Professor

McCAREY, BERNARD E., Ph.D., (Marquette Univ.)
Assistant Professor

POLACK, FRANK M., M.D., (San Marcos Univ.)
Associate Professor

RAMER, RICHARD M., Ph.D., (Stevens Inst. of Tech.)
Assistant Professor and
Assistant Professor in Biochemistry

RUBIN, MELVIN L., M.D., (Univ. of California)
Professor

SAKIMOTO, TAKASHI, M.D., (Nagasaki University)
Instructor

VARNELL, EMILY D., B.S., (Northeastern Univ.)
Research Instructor

WICKHAM, MARVIN G., Ph.D., (Wash. State Univ.)
Assistant Professor/VA

WIND, CHIEL A., M.D.,
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WORTHEN, DAVID M., M.D., (Univ. of Minnesota)
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ANDERSON, WILLIAM H., M.D., (Univ. of Chicago)
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BELYEU, JESSE H., M.D., (Tulane Univ.)
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CLOWER, JAMES W., M.D., (Emory University)
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COBB, WILLIAM T., M.D., (Univ. of Fla.)
Clinical Assistant Professor/Ocala

DUKES, EARLE T., M.D., (Emory University)
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FREEMAN, GEORGE W., M.D., (Tulane Univ.)
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HERRON, WARREN L., M.D., (Univ. of Florida)
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HONIG, ALAN J., M.D., (Univ. of Miami)
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KNAUER, WILLIAM J., JR., M.D., (Geo. Wash. Univ.)
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LESTER, ROBERT H., M.D., (Med. Col. of Ga.)
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LUCAS, HOWARD C., M.D., (Cornell University)
Clinical Associate/Winter Haven

MAGRUDER, GEORGE B., M.D., (Cornell University)
Clinical Assistant Professor/Orlando

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VAN ARNAM, CARL E., M.D., (Univ. of Oregon)
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ORTHOPAEDICS

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Assistant Professor

DEDO, RICHARD G., M.D., (Northwestern)
Assistant Professor and JHEP Division Chairman

* ENNEKING, WILLIAM F., M.D., (Univ. of Wisconsin)
Professor and Chairman

HOOD, HENRY H., JR., M.D., (Jefferson Med. Col.)
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* PASCHALL, HOMER A., M.D., (Bowman Gray)
Associate Professor

PIOTROWSKI, GEORGE, Ph.D., (Case West. Reserve)
Assistant Professor and
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Volunteer Faculty

ALEXANDER, LEON H., M.D., (Med. Col. of Va.)
Clinical Instructor/Lake City

BRADY, LOUIS P., M.D., (Emory University)
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CROFT, CARL L., M.D., (Duke University)
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DYER, JAMES W., M.D., (Oklahoma Univ.)
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FIPP, GEORGE J., M.D., (Indiana Univ.)
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FRY, RICHARD M., M.D., (Temple University)
Clinical Assistant Professor/Gainesville

GILLESPY, THURMAN, JR., M.D., (Jefferson Med. Col.)
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GILMAN, STEVE H., M.D., (Univ. of Florida)
Clinical Instructor/Ocala

GREEN, C. STANTON, M.D., (Univ. of Miami)
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GUNTHER, OSCAR R., M.D., (Universidad Nat'l.)
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PATHOLOGY

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* DONNELLY, WILLIAM H., M.D., (Univ. of Ottawa)
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* FELDHERR, CARL, Ph.D., (Univ. of Pennsylvania)
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* HACKETT, RAYMOND L., M.D., (Univ. of Vermont)
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*KALLENBACH, ERNST A., Ph.D., (McGill Univ.)
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*LARKIN, LYNN H., Ph.D., (Univ. of Colorado)
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*MOSCOVICI, CARLO, Ph.D., (Univ. of Rome)
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Professor

*REITH, EDWARD J., Ph.D., (New York Univ.)
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*ROSS, MICHAEL H., Ph.D., (New York Univ.)
Professor

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*SHAW, LYNN FLORY, Ph.D., (Cambridge Univ.)
Assistant Professor

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Professor and Chairman and
Professor of Pediatrics

*STETSON, CHANDLER A., M.D., (Harvard Univ.)
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*TEAGUE, PERRY O., Ph.D., (Univ. of Oklahoma)
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*WOODARD, JAMES C., D.V.M., Ph.D., (M.I.T.)
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KLEIN, ROBERT E., M.D., (Bowman Gray)
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RHATIGAN, RONALD M., M.D., (Univ. of Iowa)
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PEDIATRICS

*AYOUB, ELIA M., M.D., (American Univ. of Beirut)
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DeBUSK, FRANKLIN L., M.D., (Johns Hopkins)
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EGAN, EDMUND A., II, M.D., (Emory University)
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EITZMAN, DONALD V., M.D., (Univ. of Iowa)
Professor

FENNELL, ROBERT S., III, M.D., (Univ. of Florida)
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GARRISON, DONALD, M.D., (Univ. of N.C.)
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MIALE, THOMAS D., M.D., (Univ. of Pittsburgh)
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ROSENBLOOM, ARLAN L., M.D., (Univ. of Wis.)
Associate Professor

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RUSHTON, F. EDWARDS, M.D., (Univ. of Virginia)
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SCHIEBLER, GEROLD L., M.D., Ph.D., (Harvard U.)
Professor and Chairman

SCHULKIND, MARTIN L., M.D., (Univ. of Chicago)
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ST. PETERY, LOUIS B., JR., M.D., (Univ. of Fla.)
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Professor and Professor in Pathology

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WEECH, A. ASHLEY, M.D., (Johns Hopkins)
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WEISS, CHARLES F., M.D., (Vanderbilt University)
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BELL, WILLIAM R., M.D., (Duke University)
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MARRIOTT, HENRY J., M.D., (Oxford University)
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MOORE, MARCUS M., M.D., (Duke University)
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MORGAN, WILLIAM C., M.D., (Univ. of Florida)
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MORONEY, JOHN D., M.D., (St. Louis Univ.)
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MOSS, JAMES K., M.D., (Med. Col. of Ga.)
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PESEK, JOSEPH A., M.D., (Univ. of Miami)
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WOLFSON, SORRELL L., M.D., (Vanderbilt Univ.)
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WOODWARD, PAT, M.D., (Emory University)
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PHARMACOLOGY & THERAPEUTICS

* CHIOU, GEORGE C., Ph.D., (Vanderbilt Univ.)
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* FOX, LAURETTA E., Ph.D., (Univ. of Ill.)
Associate Professor

* GARG, LAL C., Ph.D., (Univ. of Florida)
Assistant Professor

* KEM, WILLIAM R., Ph.D., (Univ. of Ill.)
Assistant Professor

* LEIBMAN, KENNETH C., Ph.D., (New York Univ.)
Professor

* MAREN, THOMAS H., M.D., (Johns Hopkins)
Professor and Chairman

* MUTHER, THOMAS F., Ph.D., (Univ. of Leeds)
Assistant Professor

* ROLF, LESTER L., JR., Ph.D., (Texas A&M Univ.)
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Professor and Professor in Medicine,
Director, Clinical Research Center

* SILVERMAN, DAVID N., Ph.D., (Columbia Univ.)
Assistant Professor

* TRAVIS, DAVID M., M.D., (Vanderbilt Univ.)
Professor and Professor in Medicine

* VOGH, BETTY P., Ph.D., (Univ. of Florida)
Assistant Professor

* WEINSTEIN, IRA, Ph.D., (George Wash. Univ.)
Associate Professor

PHYSIOLOGY

* CASSIN, SIDNEY, Ph.D., (Univ. of Texas)
Professor

* FREGLY, MELVIN J., Ph.D., (Rochester Univ.)
Professor

* JAEGER, MARC J., M.D., (University of Bern)
Associate Professor and
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* OTIS, ARTHUR B., Ph.D., (Brown University)
Professor and Chairman

* POSNER, PHILIP, Ph.D., (SUNY-Downstate)
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* STAINSBY, WENDELL N., Sc.D., (Johns Hopkins)
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PSYCHIATRY

ADAMS, JOHN E., M.D., (Cornell Med. Col.)
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ASHAMALLA, MEDHAT, M.D., (U. of Alexandria)
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Assistant Professor

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LYONS, HENRY R., M.D., (Georgetown Univ.)
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MOST, BERTHA M., M.D., (Univ. of Pittsburgh)
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MUNIZ, CARLOS, M.D., (Univ. of Havana)
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PENA-RAMOS, ABELARDO, M.D., (Buenos-Aires U.)
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De La TORRE, JOSE I., M.D., (Univ. of Honduras)
University Psychiatrist and
Assistant Professor

WARHEIT, GEORGE J., Ph.D., (Ohio State Univ.)
Associate Professor and
Associate Professor of Sociology

WEBB, SUSAN C., M.S.W., (Florida State Univ.)
Instructor in Social Work

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BELL, ROBERT E., JR., M.D., (Bowman-Gray)
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BELL, ROGER A., Ed.D., (Wayne State Univ.)
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BERNSTEIN, STUART, M.D., (George Wash. Univ.)
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BLANK, HENRY S., M.D., J.D.,
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BLOOD, ARTHUR, M.D., (Emory University)
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BURKE, THOMAS F., M.D., (National Univ. of Ireland)
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CAHOON, STUART N., M.D., (Temple Univ.)
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Neurological Surgery

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Professor and Chief, Chief of Staff/Shands

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FOOTE, PERRY A., JR., M.D., (Univ. of Florida)
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Pediatric Surgery

GERAMI, SIROOS, M.D., (Pahlavi University)
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TALBERT, JAMES L., M.D., (Vanderbilt Univ.)
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WEBB, H. WARNER, M.D., (Emory University)
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WILKINSON, ALBERT H., JR., M.D., (Jefferson U.)
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Plastic and Reconstructive Surgery

BINGHAM, HAL G., M.D., (University of Kansas)
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GREER, DONALD M., M.D., (Univ. of Cincinnati)
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HABAL, MUTAZ B., M.D., (Amer. Univ. of Beirut)
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KREUTZIGER, KEITH L., D.D.S., (Univ. of Mo.)
Assistant Professor, Oral Surgery

MONTGOMERY, JOHN C., D.D.S., (Univ. of Mo.)
Professor (Oral Surgery) and Chairman
Department of Surgery (Dentistry), Professor of
Surgery (Medicine)

Volunteer Faculty

DUNCAN, ROBERT E., M.D., (Indiana Univ.)
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DUSHOFF, IRA M., M.D., (University of Penn.)
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FURLOW, LEONARD T., M.D., (Washington Univ.)
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KAYE, BERNARD L., M.D., (Harvard Univ.)
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MORGAN, BERNARD L., M.D., (London Univ.)
Clinical Associate Professor and JHEP Division Chairman

SNYDER, GILBERT B., M.D., (Johns Hopkins)
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TANZER, RADFORD, M.D., (Harvard University)
Clinical Professor/Hanover, New Hampshire

WALTON, BRUCE E., M.D., (Western Reserve)
Clinical Associate Professor/Gainesville

Thoracic and Cardiovascular Surgery

DAICOFF, GEORGE R., M.D., (Univ. of Indiana)
Professor and Chief

GOFF, DALEY, M.D., (University of N.C.)
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MOULDER, PETER V., M.D., (Univ. of Chicago)
Professor

RAWITSCHER, ROBERT E., M.D., (Harvard Univ.)
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RAYL, JOHN E., M.D., (Univ. of Louisville)
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TOBIAS, JOEL A., M.D., (Univ. of Pennsylvania)
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DAVIS, JAMES, M.D., (Harvard University)
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Urology

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MILLER, GEORGE H., M.D., (Penn. State Univ.)
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WALKER, R. DIXON, III, M.D., (Univ. of Miami)
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BROWN, ROBERT J., M.D., (Med. Col. of Ga.)
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ECKELS, ALAN R., M.D., (Univ. of Florida)
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FERGUSON, FREDERICK F., M.D., (Univ. of Arkansas)
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VAN NORTWICK, WILLIAM A., M.D., (Vanderbilt)
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Name/Hometown/Internship

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BUCKLEY, ROBERT/Gainesville, Fla.

BURDETTE, DAVID CHAMBERS/Winter Haven, Fla.

BYLER, PHILIP RAY/Blountstown, Fla.

CAMPBELL, DAVID MAXWELL/Laurel Hill, Fla.

CARRELL, ROBERT LEE/FT. Myers, Fla.

COLVIN, DONALD BERNARD/Tice, Fla.

CRAWLEY, GARY LEE/Jacksonville, Fla.

DeMARCO, FRANK JOHN, JR./Gainesville, Fla.

DEROVANESIAN, JACK/Opa Locka, Fla.

EADDY, LIVINGSTON LEE, JR./Lake City, Fla.

EBERLY, DONALD ALAN/Sarasota, Fla.

ELLIS, GERRY FRANCIS/Crestview, Fla.

FIDDELKE, LAURA MAY/East Palatka, Fla.

FISHER, WILLIAM FREDERICK/Winter Park, Fla.

FITTS, JERE JONATHAN/Vero Beach, Fla.

FRIEDBERG, HOWARD/Ft. Lauderdale, Fla.

GARRETT, LESLIE WAYNE/Palatka, Fla.

GEFTER, JEFFREY WILLIAM/Jacksonville, Fla.

GOLD, MARK STEPHEN/Hollywood, Fla.

GREEN, DAVID JUSTICE/Haines City, Fla.

HALDEMAN, LARRY WILLIAM/Temple Terrace, Fla.

HAMILTON, JACK ELLIS/Tracyton, Wash.

HARRIS, WILLIE GEORGE/Williston, Fla.

HARTWIG, BRUCE ALLAN/St. Petersburg, Fla.

HASEMAN, MICHAEL/Lakeland, Fla.

HENDERSON, ROBERT CONNAR/Tampa, Fla.

HENDRICKSON, JOHN M., JR./Ft. Lauderdale, Fla.

HUDSON, BRUCE WYETH/Ft. Myers, Fla.

IACONA, MARIE ANN/Daytona Beach, Fla.

KING, LAWRENCE PAUL/Denver, Colo.

KRAMER, HOWARD LEIGH/Hollywood, Fla.

LASSITER, WILLIAM BUCHANAN/Huntsville, Ala.

LONG, WILLIAM GROVES, JR./Madeira Beach, Fla.

LOTTENBERG, RICHARD/N. Miami Beach, Fla.

LUKAS, GARRON MICHAEL/Ocala, Fla.

McCLURE, SAMUEL SIDNEY/Melbourne, Fla.

McDADE, EDWARD DONALD, JR./Orlando, Fla.

MANNIS, MARK JOEL/Jacksonville, Fla.

MARCUS, ROBERT BROWN, JR./Gainesville, Fla.

MASON, WILLIAM GRAY/Clearwater, Fla.

MILLER, RICHARD/N. Miami Beach, Fla.

MORRISON, LEON MACMILLAN, SR./Sebring, Fla.

MORSE, KENNETH HAZEN/Baldwin, N.Y.

MOTT, MARY SUSAN/Lake Wales, Fla.

NEWMARK, ZEPHRON GABRIEL/Miami, Fla.

PARARO, LUTHER LEONARD, III/Tallahassee, Fla.

PERKINS, ARTHUR FRANK/Pinellas Park, Fla.

PERRY, JAMES McLEOD/Orlando, Fla.

SADLER, RICHARD BONNELL/Jacksonville, Fla.

SAKAS, EDWARD LAWRENCE/Alexandria, Va.

SANCHEZ, ALEXANDER FRANCIS/Plant City, Fla.
SCHIAVONE, DANIEL CHARLES, JR./Orlando, Fla.
SHORT, DOUGLAS JEFFERSON/Wilmington, Del.
SLATTERY, JAMES BRIAN/Pompano Beach, Fla.
SLEVINSKI, RICHARD STEPHEN/Tallahassee, Fla.
SPALDING, DAVID MURL/Winter Park, Fla.
SPENCER, JAMES CRAIG/Ft. Lauderdale, Fla.
STEINBERG, NORMAN IRWIN/Lowell, Mass.
STEPP, JOSEPH THOMAS/Jacksonville, Fla.
SVENSON, ERIC WOLFGANG/Taylor, Mich.
SWARTZENDRUBER, FREDERICK/Sarasota, Fla.
SWILLEY, SYLVIA SERENA/Marianna, Fla.
TUCKER, DANIEL McKENDREE/Gainesville, Fla.
VARLEY, ARTHUR JOSEPH/San Diego, Calif.
WATERS, JOHN STEPHEN/Jacksonville, Fla.
WEYERS, BARBARA ANN/Maitland, Fla.
WILLIAMS, CHARLES ALFRED/Orlando, Fla.
WILLIAMS, DENNIS EUGENE/Miami, Fla.
ZARZOUR, ROBERT JOSEPH/Miami, Fla.

Class of 1976

ALEXANDER, ROBERT WARREN/Jacksonville, Fla.
ALFORD, WILLIAM PRESTON/Tampa, Fla.
ANDERSON, CRAIG STEVEN/Havana, Fla.
ASHMORE, ROBERT E./Tallahassee, Fla.
BADIKIAN, ARTHUR V./Ridgefield Park, N.J.
BAYTOP, ROSE DAWKINS, Jacksonville, Fla.
BEHNKE, MARYLOU/Orlando, Fla.
BLIZIOTES, MATTHEW MICHAEL/Gainesville, Fla.
BOWDLE, RICHARD JOHN/Gainesville, Fla.
BRADFORD, EDWARD AYERS/Winter Garden, Fla.
BRICE, DAVID ALAN/St. Petersburg, Fla.
BRYAN, GLENN EDMUND, JR./Jensen Beach, Fla.
BULLARD, TIMOTHY BRUCE/Tampa, Fla.
BURTNER, DAVID EMERSON/Lehigh Acres, Fla.
CABLE, THOMAS ALLEN/Ft. Myers, Fla.
CHALFA, NICOLAI/West Palm Beach, Fla.
CHATHAM, SCOTT THOMAS/Silver Spring, Md.
CHUDNOVSKY, KATHLEEN C./Gainesville, Fla.
CRUMLEY, LEON ALBERT/Savannah, Ga.
DAVISSON, TERESA ANN/West Palm Beach, Fla.
DICKSON, DIANA/Delray Beach, Fla.
DYKES, JOSEPH HUBBARD/Lake City, Fla.
EISENBERG, IRIS/Lake Worth, Fla.
ESBENSHADE, AARON M., JR./New Holland, Pa.
FEIN, STEVEN ALAN/Miami Beach, Fla.
FISHER, JEROME PETER/Coral Gables, Fla.
FLETCHER, HOWARD VAN/Quincy, Fla.
FLING, JAMES KINGSLEY/Tallahassee, Fla.
FRANCIS, MILLICENT AGUSTA/St. Thomas, V.I.
GEH, GEORGE GOODY/Cameroon, West Afr.
GOODMAN, CAREY WHEELER/Fernandina Bch., Fla.
HARMON, WALTER ALAN/Lynn Haven, Fla.
HARRIS, RONALD EUGENE/Key West, Fla.
HIGH, PAMELA CRAIG/West Palm Beach, Fla.
HOPE, THOMAS DOMINICK/Miami, Fla.
HOWELL, GREGORY JACK/Lake Park, Fla.
HUNSINGER, EDWARD NEAL/W.Palm Beach, Fla.
JACKMAN, WARREN MAURICE/N. Miami Bch., Fla.
KARAS, MARK/Titusville, Fla.
LAMONDA, GARY WALLACE/Okeechobee, Fla.
LEATHERWOOD, MICHAEL A./Washington, D.C.
LEBER, BARRY LEE/Lakeland, Fla.
LEHTOLA, MICHAEL GENE/Brandon, Fla.
LINEAWEAVER, WILLIAM C./Gainesville, Fla.
LOSEY, MICHAEL L./Tallahassee, Fla.
McDOWALL, JAMES DOUGLAS/Gainesville, Fla.
McNEILL, ARCHIBALD ALEXANDER/Camilla, Ga.
McWHORTER, GEORGE RALPH/Meridian, Miss.
MARSH, DUNCAN RANDALL/Montgomery, Ala.
MASSARI, FRANK ANDREW, JR./Tampa, Fla.
MOCCIA, WAYNE ALLEN/Jacksonville, Fla.
MON, MANUEL JOSEPH/Orlando, Fla.
NOEL, STEPHEN IRWIN/Pensacola, Fla.
NORCROSS, MICHAEL ANATOL/Miami, Fla.
NOVIK, LARRY EDWARD/Forest Hills, N.Y.
NYBERG, CAROL ELAINE/Lake Worth, Fla.
OWENS, SANDRA CHAPPELL/Winter Haven, Fla.
PALERMO, GREGORY JOSEPH/St. Augustine, Fla.
PETRUCHA, RUTH ANN/Gainesville, Fla.
POPE, JOHN, JR./Tallahassee, Fla.
POSTMA, TOM WEDEKIND/Marianna, Fla.
PROCTOR, MICHAEL SCOTT/St. Petersburg, Fla.
RAMSEY, DAVID MADISON/Tallahassee, Fla.
ROSIN, MICHAEL AUREL/Sarasota, Fla.
SCHILDECKER, CHARLES W./Daytona Beach, Fla.
SELPH, JOHN WILLIAM/Ocala, Fla.
SELTZER, HOWARD MICHAEL/Daytona Beach, Fla.
SELTZER, NORMAN BROMO/Daytona Beach, Fla.
SNYDER, SCOTT/Philadelphia, Pa.
SPECTOR, STEVE SHLOMO/Miami Beach, Fla.
STALLINGS, ROOSEVELT JEROME/Sumter, S.C.
STANTON, ROBERT PAGE/Satellite Beach, Fla.

STEWART, THOMAS WILLIAM, JR./Lakeland, Fla.
STORCH, DANIEL DAVID/Jacksonville, Fla.
THOMAS, ROY EARL, JR./Winter Haven, Fla.
TUCKER, CHRISTINE ADAMS/Gainesville, Fla.
ULRICH, GUY RICHARD/Ft. Lauderdale, Fla.
WALKER, ALONZO PATRICK/St. Petersburg, Fla.
WELLS, JAMES RIFE/Enterprise, Ala.
WELCH, DANIEL WAYNE/Nova, Ohio
WETZEL, ROBERT HARVEY, JR./Babson Park, Fla.
WHEELER, LAWRENCE ARTHUR/Ft. Walton Beach, Fla.
WICKSTRUM, DALE ALAN/Pompano Beach, Fla.
WINFIELD, LEROY, JR./Pompano Beach, Fla.
ZALIS, BRIAN ALAN/Bay Harbor, Fla.
ZONDLO, FRANK CARL/Bethlehem, Pa.

Class of 1977

ALLEN, RICHARD LEE/Hatchechubbee, Ala.
ANDERSEN, HENRIK WAINO/Gainesville, Fla.
ATKINS, KENNETH VERNARD/Jacksonville, Fla.
BARTLEY, DONALD CRAIG/Jacksonville, Fla.
BEASLEY, GEOFFREY ENOCHS/Winter Haven, Fla.
BELITSKY, RICHARD/N. Miami, Fla.
BIDGOOD, WILLIS DEANES, JR./DeLand, Fla.
BLAIR, GORDON T., JR./Gainesville, Fla.
BRYAN, LIONEL/Miami, Fla.
CARVER, CHRISTOPHER C./Ft. Lauderdale, Fla.
COBBS, THREASA ANN/Ft. Pierce, Fla.
COLLINS, HAMILTON PURCELL/Panama City, Fla.
CONLIN, DANIEL PATRICK/Jacksonville, Fla.
COOPER, KEVIN DUNCAN/Melbourne, Fla.
CRANE, JEFFREY MAJOR/Plantation, Fla.
CRICK, WILLIAM FRANKLIN/St. Petersburg, Fla.
DAVIS, GAITHER GRIFFITH/Aiken, S.C.
DAVIS, ROBERT GLENN, JR./Jacksonville, Fla.
DELANEY, SARAH GOODWIN/Ferrum, Va.
DIBELLA, CONSTANCE NAGI/Dearborn, Mich.
DICKEY, JAMES WILLIAM/Ft. Lauderdale, Fla.
DICKSON, WANDA LEE/Marianna, Fla.
DOBSON, DAVID CHRISTOPHER/Gainesville, Fla.
DORSEY, SANDRA ROSE/Avon Park, Fla.
DUNKWU, ANTHONY AMECHI/Nigeria
EDWARDS, JEANNE MARY/Eglin AFB, Fla.
EVANS, RAYMOND CHARLES/St. Petersburg, Fla.
FEASTER, BURNES LYNN/St. Petersburg, Fla.
FISHER, RONALD PAUL/Miami, Fla.
FORT, RICHARD ALLEN/W. Palm Beach, Fla.
GALANSKY, STANLEY HOWARD/Miami, Fla.
GARNER, THOMAS KIRKLAND/Greenville, S.C.
GEFTER, MONICA LEHR/Andres Isla, Columbia, S.A.
GOLDER, STEPHEN LANDGON/Melbourne, Fla.
GRAHAM, GORDON DREXEL/Balboa, Canal Zone
GRIGAS, JOHN DANIEL/Pembroke Pines, Fla.
HAMILTON, RALPH FREDERICK/Germantown, Tenn.
HEIL, BRUCE JOHN/Miami, Fla.
HINSON, WILLIAM ANDREW/Pensacola, Fla.
HUTSON, JAMES JACKSON/Miami, Fla.
JACOBSON, DAN GREGORY/Jacksonville Beach, Fla.
KOKOMOOR, FRANKLIN WESLEY/Gainesville, Fla.
KUCHLER, LINTON LOUIS/Ormond Beach, Fla.
LANE, ELIZABETH HARRER/Gainesville, Fla.
LANE, TIMOTHY TED/Ormond Beach, Fla.
LEACH, GREGORY EDWARD/Clearwater, Fla.
LEACH, WILLIAM CHARLES/Clearwater, Fla.
LEE, LOUIS GEORGE/Monticello, Fla.
LIEBERMAN, ELLICE SILVER/Philadelphia, Pa.
LIPMAN, JOEL KEITH/Naples, Fla.
LOSASSO, BARRY EDWARD/Melbourne Beach, Fla.
LOW, GORDON JOE/Miami, Fla.
LOWELL, ANNE LOUISE/Ormond Beach, Fla.
LUKOWSKI, MICHAEL JOHN S./Charles, West Va.
McCLURE, JOSEPH ALTON/Ormond Beach, Fla.
McGILL, OCTAVIOUS/Lake City, Fla.
McINNIS, ALEXANDER NOTT/Gainesville, Fla.
MADDOX, MICHAEL DEAN/Sanford, Fla.
MARTIN, SHARON DILLINGHAM/Tallahassee, Fla.
MAYHEW, DAVID ERLE/Gainesville, Fla.
MESTRE, JOSE RAMON, JR./Miami Beach, Fla.
MEYER, KENNETH EVAN/Orlando, Fla.
MONDSCHEIN, SIMA GRACE/Miami Beach, Fla.
MUNOZ, LOUIS AUGUSTO/Ft. Lauderdale, Fla.
MYERS, MANUEL LEON/Tampa, Fla.
NADEAU, STEPHEN EDWARD/Gainesville, Fla.
NEELY, KENNETH WHITE/Miami, Fla.
NORSTEIN, MARK BARRY/Franklyn Square, N.Y.
ONGLEY, JAMES PATRICK/Fairfield, Conn.
PAREDES, KEITH BERNARD/Orlando, Fla.
PARNESS, WINFRED/Lake City, Fla.
PAULK, WILFORD EARL/Black, Ala.
PURDON, ALFRED, JR./Miami, Fla.
RAPIER, GEORGE McCARROLL/Pensacola, Fla.
RAYNER, ABIGAIL VANSICKLER/Tallahassee, Fla.
REYNOLDS, JAMES CHARLES/Madia, Pa.

ROHLWING, HARVEY GEORGE, JR./Venice, Fla.
ROSS, JAMES WILSON/St. Petersburg, Fla.
SALLMAN, ALAN LAWRENCE/S. Miami, Fla.
SALUK, ARTHUR BARUCH/Miami, Fla.
SCOTT, DAVID WILLIAM/Chattahoochee, Fla.
SHARROCK, SHIRLEY DEAN/Rich Square, N.C.
SIMRELL, CHARLES RAYMOND/Gainesville, Fla.
SISK, ROGER HARLAN/Jacksonville, Fla.
STALNAKER, JEFFREY CLAY/Tampa, Fla.
STARK, CRAIG FRANK/N. Miami Beach, Fla.
SWEENEY, JOHN PATRICK/Ft. Lauderdale, Fla.
TAYLOR, JAMES HOWARD/River Edge, N.J.
THORNTON, JONATHAN CEDRIC/Montgomery, Ala.
TOLHURST, KIRK DUNCAN/Amherst, Mass.
TRIMBLE, JAMES WILLIAM/Jacksonville, Fla.
UNDERDOWN, WILLIAM E./Mamaroneck, N.Y.
WAGNER, DONALD CHARLES/Vero Beach, Fla.
WALKER, FRANK CARLISLE, Jr./Albany, Ga.
WASSERMAN, BRUCE/Hollywood, Fla.
WATKINS, SAMUEL DON/Miami, Fla.
WATSON, ROOSEVELT/Quincy, Fla.
WEBB, CHERYLE BRANCH/Ft. Myers, Fla.
WEISS, BARTLEY MYRON/Gainesville, Fla.
WHITE, MALCOLM ANDERSON, JR./Pensacola, Fla.
WILLIAMS, BRADFORD, THOMAS/Melbourne, Fla.
WILLIAMS, CLEVELAND/Jacksonville, Fla.
WOLFF, RANDALL L./Hallendale, Fla.
YOCUM, DAVID EUGENE/Melbourne, Fla.
YOFFE, MARK/Opa-Locka, Fla.

GRADUATE STUDENTS

Biochemistry

BUNDE, TERRY/Orlando, Fla.
CHU, MON-LI/Taipei, Taiwan
CONNER, GREGORY/Jacksonville, Fla.
DENSLOW, NANCY D./Falls Church, Va.
FRANCIS, GARY/Jacksonville, Fla.
GARDNER, CHARLES/Lincoln, Nab.
GROW, THOMAS E./Pensacola, Fla.
HESSLER, ROBERT A./Harden, Mont.
KALIN, JACK/Sayre, Pa.
MATTERN, MICHAEL/Palmerton, Pa.
MATTHEWS, DAVID/Lakeland, Fla.
MON, MANUEL/Orlando, Fla.
PARK, WILLIAM D./Columbia, S.C.
THRALL, CARY/Union City, Ind.
VAN VEEN, JACQUES/Arliba (N.A.), Netherlands
WELCH, DANIEL/Nova, Ohio

Immunology & Medical Microbiology

*AXELROD, BENNETT J./Long Beach, N.Y.
BLALOCK, JAMES E./Madison, Fla.
BROWN, ALAN/Salina, Kan.
CUCHENS, MARVIN/Pensacola, Fla.
FAITH, ROBERT/El Paso, Tex.
FORTMAN, CHRISTINE/Champaign, Ill.
FRANCO, JORGE A./Gainesville, Fla.
*GADOL, NANCY/Washington, D.C.
*GREEN, THOMAS/Dorchester, Neb.
JACQUES, ALICE PENELOPE/Little Rock, Ark.
JIMENEZ, HUMBERTO/Havana, Cuba
JONES, JOYE/Auburn, Ala.
KADING, VERNON/Pelican Rapids, Minn.
KON, NEAL DAVID/Great Nack, N.Y.
McCUMBER, LARRY/Mullins, S.C.
ROBERTSON, JOHN W., JR./Knoxville, Tenn.
SENTERFITT, VERNON C./Gainesville, Fla.
SHANKEY, THOMAS/Ft. Walton Beach, Fla.
*SHIMP, ROBERT/Jacksonville, Fla.
SILVA, ROBERT/Louisville, Ky.
WEBER, RICHARD J./Ransom, Ill.
WELKOS, SUSAN/Baltimore, Md.

Neuroscience

BOAST, CARL/Ottawa, Ontario, Canada
GOULD, WILLIAM/Ft. Pierce, Fla.
GRAY, HARRY E./Rochester, New York
HALL, NICHOLAS/Gainesville, Fla.
HUNTER, BRUCE/Zeigler, Ill.
IUVONE, PAUL/Hallandale, Fla.
KUO, DAVID C./Northfield, Minn.
RILEY, JOSEPH N./O'Neals, Calif.
WALLIS, CLEATUS/Ft. Worth, Tex.
WELLS, MICHAEL R./Gainesville, Fla.
WILKERSON, MARY/Gainesville, Fla.
ZORNETZER, MICHELLE/Gainesville, Fla.

*Students pursuing M.S. degrees

Pathology

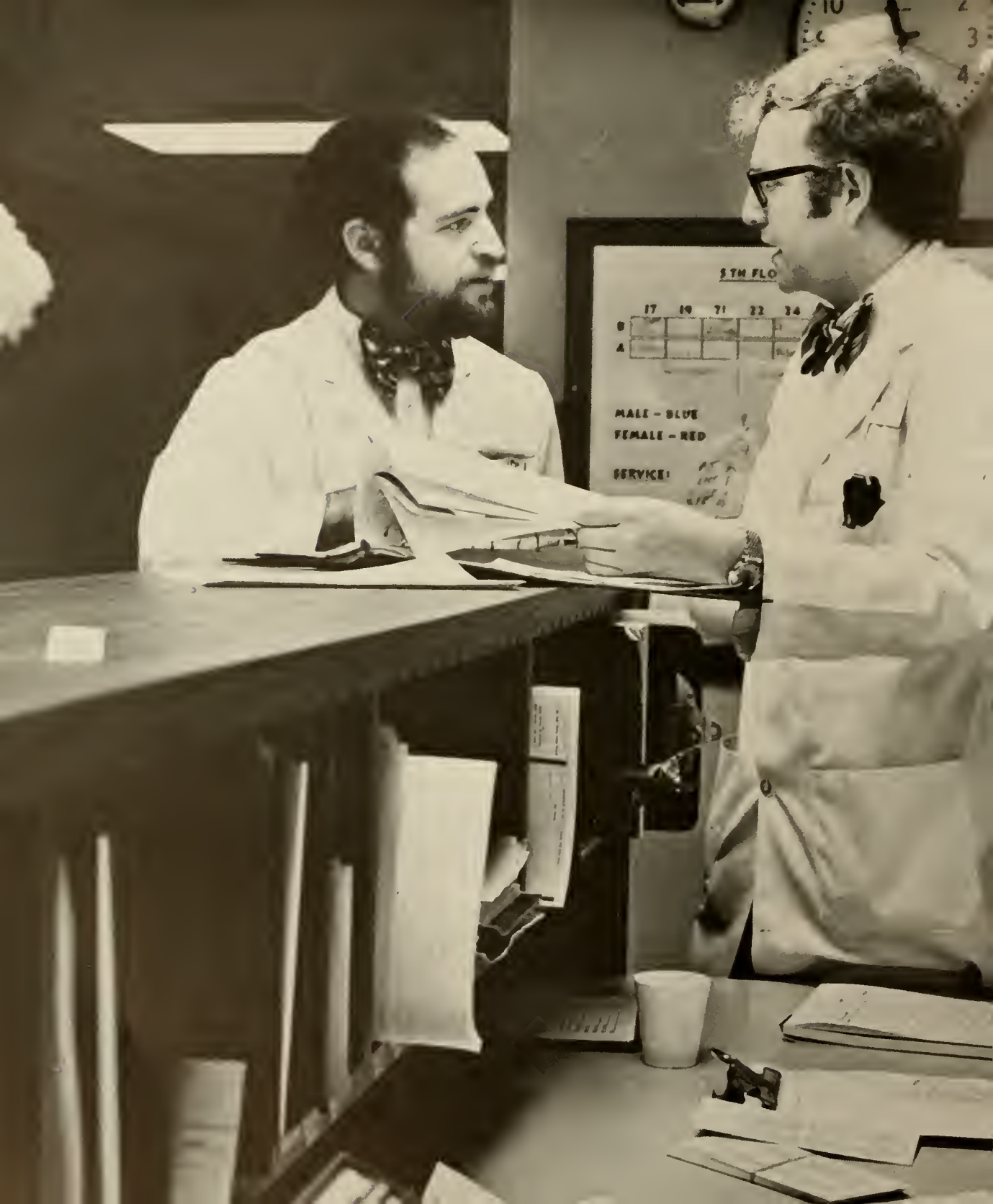
BURCHARDT, HANS/Lincoln, Neb.
CALDERWOOD, MARION, (V.M.D.)/Gainesville, Fla.
CHI, DENNIS/Taipei, Taiwan
CLARK, DARRYL/Durham, N.C.
*FISKE, ROBERT (D.V.M.)/El Paso, Tex.
HARTY, BARBARA/Tucson, Ariz.
IDIKIO, HALLIDAY, (M.D.)/Ibadan, Nigeria
PHILLIPS, CATHERINE/Gainesville, Fla.
SIMRELL, CHARLES/Gainesville, Fla.

Pharmacology & Therapeutics

ACKERMAN, DENNIS M./Baltimore, Md.
DUNLAP, CLAUDE E.,III/Camp Atterbury, Ind.
FRETTHOLD, DAVID W./Rocky River, Ohio
HAYWOOD, JOSEPH/Lexington, Ky.
KEARIN, MICHAEL/Ft. Walton Beach, Fla.
LIDDELL, NORMAN/Menlo Park, Calif.
MATTHEWS, ROBERT T./Philadelphia, Pa.
ROWELL, PETER P./St. Petersburg, Fla.
ZIMMERMAN, THOM/Lincoln, Ill.

Physiology

*BLACK, DAVID J./E. Lansing, Mich.
*DAVIS, GEORGE A./Waco, Tex.
EVANS, JOHN N./Worcester, Mass.
HUNT, RAYMOND D./Melrose Park, Ill.
LAMBERT, CHARLES R./New Orleans, La.
*NEWSOME,DEBORAH G./Jacksonville, Fla.
PEREZ, JOSE M./Miami Beach, Fla.
*NICHOLS, LINDA R./Gainesville, Fla.
THRASHER, TERRY N./Levenworth, Kan.
TYLER, THOM L./Gainesville, Fla.
WALLIS, RICHARD G./Jacksonville, Fla.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